REPORT NUMBER: 208-MGA-2008-011

VEHICLE SAFETY COMPLIANCE TESTING
FOR
FMVSS 208, OCCUPANT CRASH PROTECTION
FMVSS 212, WINDSHIELD MOUNTING
FMVSS 219, WINDSHIELD INTRUSION (PARTIAL)
FMVSS 301, FUEL SYSTEM INTEGRITY

TOYOTA MOTOR CORPORATION 2008 TOYOTA SCION XB MPV NHTSA NO.: C85100

PREPARED BY:
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TEST DATES: MAY 9, 2008 - JULY 1, 2008

FINAL REPORT DATE: NOVEMBER 7, 2008

#### **FINAL REPORT**

PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
OFFICE OF ENFORCEMENT
OFFICE OF VEHICLE SAFETY COMPLIANCE
1200 NEW JERSEY AVENUE, S.E., NVS-220
WASHINGTON, D.C. 20590

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#### 15. Supplementary Notes

#### 16. Abstract

Compliance tests were conducted on the subject 2008 Toyota Scion XB in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP208-13 for the determination of FMVSS 208 compliance. Test failures identified were as follows:

TP208-13, Data Sheet 8, Step 19 and 20; The left rear, center rear, and right rear belt would not lock at the minimum length. S7.1.1.5(c)(7) The difference between the measurements recorded under S7.1.1.5(c)(6) and (4) shall not exceed 2 inches.

A seat belt lockability test was performed with no child restraint installed, with the seat belts fastened and with all the seat belt webbing retracted. The seat belts did not lock in this position. No further action was taken because with child restraints installed the webbing would be spooled out enough that the seat belt would lock to secure the child restraint.

17. Key Words  Frontal Impact 40 kmph Vehicle Safety ( FMVSS 208, "Occupant ( FMVSS 212, "Windshield FMVSS 219, (partial), "W FMVSS 301, "Fuel Syste	Crash Protection"    Mounting"   indshield Zone Intrusion"	from the followin U.S. Department National Highway Administration	port are available g: of Transportation Traffic Safety ation Services (TIS), Avenue, S.E.
19. Security Classif. (of	20. Security Classif. (of this	21. No. of	22. Price
this report)	page)	Pages	
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#### **SECTION 1**

#### PURPOSE OF COMPLIANCE TESTS

The tests performed are part of a program conducted for the National Highway Traffic Safety Administration (NHTSA) by MGA Research Corporation (MGA) under Contract No. DTNH22-03-D-11002. The purpose of this test was to determine whether the subject vehicle, a 2008 Toyota Scion XB, NHTSA No. C85100, meets certain performance requirements of FMVSS 208, "Occupant Crash Protection"; FMVSS 212, "Windshield Mounting"; FMVSS 219, "Windshield Zone Intrusion"; and FMVSS 301, "Fuel System Integrity". The compliance test was conducted in accordance with OVSC Laboratory Test Procedure No. TP208-13 dated July 27, 2005.

# **SECTION 2**

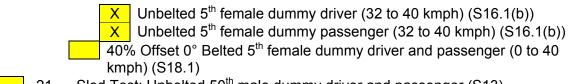
# **TESTS PERFORMED**

Test Vehicle: 2008 Toyota Scion XB NHTSA No.: C85100

Test Program: FMVSS 208 Compliance Test Dates: 5/9/08 – 07/1/08

The following checked items indicate the tests that were performed:

X	1.	Rear outboard seating position seat belts (S4.1.1.2(b) & (S4.2.4)
X	2.	Air bag labels (S4.5.1)
X	3.	Readiness indicator (\$4.5.2)
X X X X	4.	Passenger air bag manual cut-off device (S4.5.4)
X	5.	Lap belt lockability (S7.1.1.5)
X	6.	Seat belt warning system (S7.3)
X	7.	Seat belt contact force (S7.4.4)
X	8.	Seat belt latch plate access (S7.4.4)
X	9.	Seat belt retraction (S7.4.5)
X	10.	Seat belt guides and hardware (S7.4.6)
X	11.	Suppression tests with 12-month-old CRABI dummy (Part 572, Subpart R)
X	12.	Suppression tests with newborn infant (Part 572, Subpart K)
X	13.	Suppression tests with 3-year-old dummy (Part 572, Subpart P)
X	14.	Suppression tests with 6-year-old dummy (Part 572, Subpart N)
X	15.	Test of reactivation of the passenger air bag system with an unbelted 5 <sup>th</sup>
	40	percentile female dummy
	16.	Low risk deployment test with 12-month-old dummy (Part 572, Subpart R)
	17. 18.	Low risk deployment test with 3-year-old dummy (Part 572, Subpart P) Low risk deployment test with 6-year-old dummy (Part 572, Subpart N)
X	10. 19.	Low risk deployment test with 5 <sup>th</sup> female dummy (Part 572, Subpart O)
X	20.	Impact Tests
<i>/</i>	20.	Frontal Oblique
		Belted 50 <sup>th</sup> male dummy driver and passenger (0 to 48 kmph)
		(S5.1.1(a))
		Unbelted 50 <sup>th</sup> male dummy driver and passenger (0 to 48 kmph)
		(S5.1.2(a)(1))
		Unbelted 50 <sup>th</sup> male dummy driver and passenger (32 to 40 kmph)
		(S5.1.2(a) (1) or S5.1.2(b))
		X Frontal 0°
		Belted 50 <sup>th</sup> male dummy driver (0 to 48 kmph) (S5.1.1.(b)(1) or
		S5.1.1(a))
		Belted 50 <sup>th</sup> male dummy passenger (0 to 48 kmph) (S5.1.1.(b)(1)
		or S5.1.1(a))
		Belted 5 <sup>th</sup> female dummy driver (0 to 48 kmph) (S16.1(a))
		Belted 5 <sup>th</sup> female dummy passenger (0 to 48 kmph) (S16.1(a))
		Belted 50 <sup>th</sup> male dummy driver and passenger (0 to 56 kmph)
		(S5.1.1.(b)(2))
		Unbelted 50 <sup>th</sup> male dummy driver and passenger (0 to 48 kmph)
		(\$5.1.2(a) (1))
		Unbelted 50 <sup>th</sup> male dummy driver (32 to 40 kmph) (S5.1.2.(a)(2) or
		S5.1.2(b)) Unbelted 50 <sup>th</sup> male dummy passenger (32 to 40 kmph)
		(S5.1.2.(a)(2) or S5.1.2(b))
		(30.1.2.(a)(2) UI 30.1.2(u))



- Sled Test: Unbelted 50<sup>th</sup> male dummy driver and passenger (S13) 21.
  - FMVSS 204 Indicant Test 22.
  - 23. FMVSS 212 Indicant Test
- FMVSS 219 Indicant Test 24.
  - 25. FMVSS 301 Frontal Indicant Test

For the crash tests, the vehicle was instrumented with 8 accelerometers. The accelerometer data from the vehicle and dummies were sampled at 10,000 samples per second and processed as specified in SAE J211/1 MAR95 and FMVSS 208, S4.13.

The dynamic tests were recorded using high-speed digital video.

#### **SECTION 3**

#### **INJURY RESULT SUMMARY FOR FMVSS 208 TESTS**

Test Vehicle: 2008 Toyota Scion XB NHTSA No.: C85100
Test Program: FMVSS 208 Compliance Test Date: 6/9/08

# 5<sup>th</sup> Percentile Female Low Risk Deployments

# 5<sup>th</sup> Percentile Female SN 511 Position 1 (Chin On Module) 6/9/08

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	16
Peak Nij (Nte)	1.0	0.3
Time (ms)	NA	85.4
Peak Nij (Ntf)	1.0	0.2
Time (ms)	NA	41.4
Peak Nij (Nce)	1.0	0.2
Time (ms)	NA	190.4
Peak Nij (Ncf)	1.0	0.1
Time (ms)	NA	225.0
Neck Tension	2070 N	686
Neck Compression	2520 N	174
Chest g	60 g	7
Chest Displacement	52 mm	6
Left Femur	6805 N	40
Right Femur	6805 N	41

Second stage fire time of 100 ms; Injuries calculated on 0 ms to 225 ms

# 5<sup>th</sup> Percentile Female SN 511 Position 2 (Chin On Rim) 6/9/08

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	6
Peak Nij (Nte)	1.0	0.2
Time (ms)	NA	115.5
Peak Nij (Ntf)	1.0	0.2
Time (ms)	NA	37.7
Peak Nij (Nce)	1.0	0.1
Time (ms)	NA	194.0
Peak Nij (Ncf)	1.0	0.0
Time (ms)	NA	6.7
Neck Tension	2070 N	586
Neck Compression	2520 N	76
Chest g	60 g	7
Chest Displacement	52 mm	11
Left Femur	6805 N	13
Right Femur	6805 N	17

Second stage fire time of 100 ms; Injuries calculated on 0 ms to 225 ms

# SECTION 3 INJURY RESULT SUMMARY FOR FMVSS 208 TESTS

Test Vehicle: 2008 Toyota Scion XB NHTSA No.: C85100 FMVSS 208 Compliance Test Date: Test Program: 7/1/08 40 kmph Frontal Crash Impact Angle: Zero degrees \_\_\_Yes Belted Dummies: X No \_\_\_ 0 to 40 kmph \_X\_ 32 to 40 kmph Speed Range: \_\_\_ 0 to 56 kmph 0 to 48 kmph Test Speed: 39.9 kmph Test Weight: 1514.7 kg

> 5<sup>th</sup> Percentile Female Frontal Crash Test Vehicles certified to S16 1(a) S16 1(b) or S18 1

\_\_\_\_ 50<sup>th</sup> male \_\_\_\_ 50<sup>th</sup> male

X 5<sup>th</sup> female X 5<sup>th</sup> female

Driver Dummy: Passenger Dummy:

venicles certified to 310.1(a), 310.1(b), of 310.1							
Injury Criteria	Max. Allowable Injury Assessment Values	Driver	Passenger				
HIC15	700	93	190				
N <sub>te</sub>	1.0	0.3	0.4				
N <sub>tf</sub>	1.0	0.3	0.3				
N <sub>ce</sub>	1.0	0.1	0.3				
N <sub>cf</sub>	1.0	0.2	0.4				
Neck Tension	2620 N	1038	477				
Neck Compression	2520 N	256	254				
Chest g	60 g	46	36				
Chest Displacement	52 mm	15	N/A				
Left Femur	6805 N	3700	3575				
Right Femur	6805 N	3440	3719				

There was no valid data after 165 msec on the Driver Right Femur (N) load cell during the frontal impact crash test.

There was no valid data collected on the Passenger Chest Displacement (mm) potentiometer during the frontal impact crash test.

# SECTION 4 DISCUSSION OF TESTS

Test Vehicle: 2008 Toyota Scion XB NHTSA No.: C85100

Test Program: FMVSS 208 Compliance Test Dates: 5/9/08 – 07/1/08

The rear seating positions failed Lap Belt Lockability at the minimum length. Data Sheet 8, Step 19 and 20; The left rear, center rear, and right rear belt would not lock at the minimum length. S7.1.1.5(c)(7) The difference between the measurements recorded under S7.1.1.5(c)(6) and (4) shall not exceed 2 inches.

A blanket and visor were not used in the suppression testing because they did not affect the sensing system used on the vehicle.

There was no valid data after 165 msec on the Driver Right Femur (N) load cell during the frontal impact crash test.

There was no valid data collected on the Passenger Chest Displacement (mm) potentiometer during the frontal impact crash test.

# **SECTION 5 TEST DATA SHEETS**

Test Vehicle: NHTSA No.:

2008 Toyota Scion XB FMVSS 208 Compliance <u>C85100</u> <u>5/9/08 – 07/1/08</u> Test Program: Test Dates:

#### **COTR VEHICLE WORK ORDER**

2008 Toyota Scion XB

Test Vehicle:

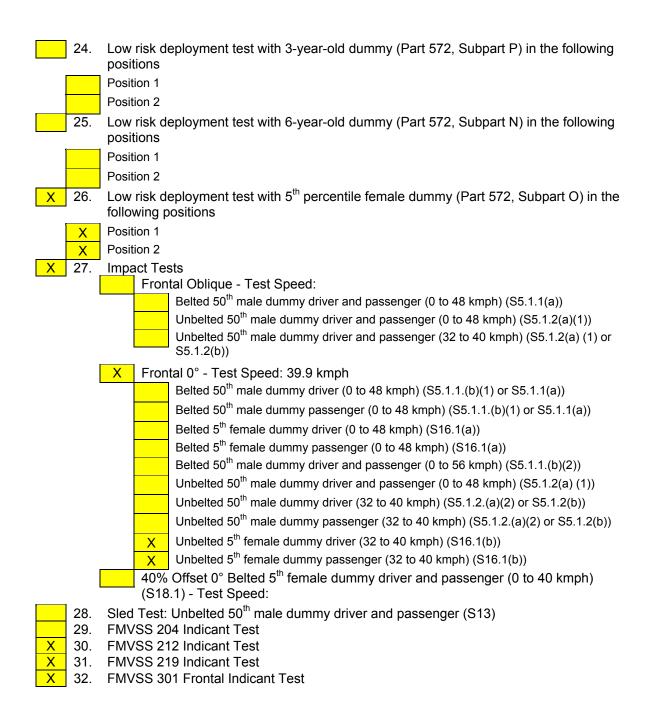
NHTSA No.:

C85100

5/9/08 - 07/1/08 Test Program: FMVSS 208 Compliance Test Dates: COTR Signature: Charles R. Case Test to be performed for this vehicle are checked below: 1. Rear Outboard Seating Position Seat Belts (S4.1.2(b)) & (S4.2.4) X 2. Air Bag Labels (S4.5.1) 3. Readiness Indicator (S4.5.2) Passenger Air Bag Manual Cut-off Device (S4.5.4) 4. X 5. Lap Belt Lockability (S7.1.1.5) Seat Belt Warning System (S7.3) 6. Seat Belt Contact Force (S7.4.4) 7. X Seat Belt Latch Plate Access (S7.4.4) 8. X Seat Belt Retraction (S7.4.5) 9. Seat Belt Guides and Hardware (S7.4.6) 10. Suppression tests with 12-month-old CRABI dummy (Part 572, Subpart R) using the 11. following indicated child restraints. Section B Britax Handle with Care 191 Χ Full Rearward Mid Position **Full Forward** Century Assura 4553 Full Rearward Mid Position **Full Forward** Century Avanta SE 41530 Full Rearward Mid Position **Full Forward** Century Smart Fit 4543 Full Rearward Mid Position **Full Forward** Cosco Arriva 02727 Full Rearward Mid Position **Full Forward** Cosco Opus 35 02603 Full Rearward Mid Position Full Forward Evenflo Discovery Adjust Right Full Rearward Mid Position **Full Forward** 212 X Evenflo First Choice 204 Full Rearward Mid Position **Full Forward** Evenflo On My Way Position Full Rearward Mid Position **Full Forward** Right V 282 Graco Infant 8457 Χ X Χ Full Rearward Mid Position **Full Forward** Section C Britax Roundabout 161 Χ Full Rearward Mid Position **Full Forward** Century Encore 4612 Full Rearward Mid Position **Full Forward** X Century STE 1000 4416 Mid Position **Full Forward** Full Rearward Cosco Olympian 02803 Full Rearward Mid Position **Full Forward** Cosco Touriva 02519 Full Rearward Mid Position **Full Forward** Evenflo Horizon V 425 Full Rearward Mid Position **Full Forward** Evenflo Medallion 254 Χ Full Rearward Mid Position X **Full Forward** X 12. Suppression tests with newborn infant (Part 572, Subpart K) using the following indicated child restraints. Section A Cosco Dream Ride 02-719 Full Rearward Mid Position **Full Forward** Suppression tests with 3-year-old dummy (Part 572, Subpart P) using the following 13. indicated child restraints where a child restraint is required.

		Section C						
	Χ	Britax Roundabout 161	X	Full Rearward	X	Mid Position	X	Full Forward
	Χ	Century Encore 4612	Х	Full Rearward	X	Mid Position	X	Full Forward
		Century STE 1000 4416		Full Rearward		Mid Position		Full Forward
		Cosco Olympian 02803		Full Rearward		Mid Position		Full Forward
		Cosco Touriva 02519		Full Rearward		Mid Position		Full Forward
		Evenflo Horizon V 425		Full Rearward		Mid Position		Full Forward
	Х	Evenflo Medallion 254	X	Full Rearward	X	Mid Position	X	Full Forward
Į.		Section D		l.				
•		Britax Roadster 9004		Full Rearward		Mid Position		Full Forward
	Χ	Century Next Step 4920	X	Full Rearward	Х	Mid Position	X	Full Forward
	Х	Cosco High Back Booster 02-442	X	Full Rearward	X	Mid Position	X	Full Forward
		Evenflo Right Fit 245		Full Rearward		Mid Position		Full Forward
	14.	Suppression tests with represen	ntativ	ve 3-year-old cl	hild ι	using the followi	ng in	dicated child
		restraints where a child restrain						
		Section C						
,		Britax Roundabout 161		Full Rearward		Mid Position		Full Forward
		Century Encore 4612		Full Rearward		Mid Position		Full Forward
		Century STE 1000 4416		Full Rearward		Mid Position		Full Forward
		Cosco Olympian 02803		Full Rearward		Mid Position		Full Forward
		Cosco Touriva 02519		Full Rearward		Mid Position		Full Forward
		Evenflo Horizon V 425		Full Rearward		Mid Position		Full Forward
		Evenflo Medallion 254	_	Full Rearward		Mid Position		Full Forward
•		Section D		•				
		Britax Roadster 9004		Full Rearward		Mid Position		Full Forward
		Century Next Step 4920		Full Rearward		Mid Position		Full Forward
		Cosco High Back Booster 02-442		Full Rearward		Mid Position		Full Forward
		Evenflo Right Fit 245		Full Rearward		Mid Position		Full Forward
X	15.	Suppression tests with 3-year-o			2, Sı	ubpart P) in the	follo	wing Forward,
ı		Middle, and Rearward seat trac	•					
	Х	Sitting on seat with back agains		•	,			
	Х	Sitting on seat with back agains			•	•		
	X	Sitting on seat with back not ag		•		•		
	X	Sitting on seat edge, spine verti		•	hild's	s side (\$22.2.2.	4)	
	X	Standing on seat, facing forwar	•	•				
	X	Kneeling on seat facing forward	•	•				
	X	Kneeling on seat facing rearwa	ra (S	522.2.2.7)				
	X	Lying on seat (S22.2.2.8)	- 4 - 4"			a Alas Callandos	!4!	
	16.	Suppression tests with represen		•		n the following p	oositi	ons
•		Sitting on seat with back agains		•	,	00 0 0 0)		
		Sitting on seat with back agains			•	,		
		Sitting on seat with back not ag		•		,	4)	
		Standing on seat facing forwar		-	iiid S	side (522.2.2.	4)	
		Standing on seat, facing forwar	•	•				
		Kneeling on seat facing forward	•	•				
		Kneeling on seat facing rearwa	ıa (S	022.2.2.1)				
V	17	Lying on seat (\$22.2.2.8)	ام اما	ummy (Dort 57)	o o.	ibport NI)	the f	allowing
X	17.	Suppression tests with 6-year-c indicated child restraints where					me f	ollowing

		Section D						
•		Britax Roadster 9004		Full Rearward		Mid Position		Full Forward
	Χ	Century Next Step 4920	X	Full Rearward	X	Mid Position	X	Full Forward
	Χ	Cosco High Back Booster 02-442	Χ	Full Rearward	X	Mid Position	X	Full Forward
	Χ	Evenflo Right Fit 245	Χ	Full Rearward	X	Mid Position	X	Full Forward
	18.	Suppression tests with represen			hild ι	ising the followi	ng in	dicated child
		restraints where a child restrain	t is r	equired.				
ī		Section D		İ				
		Britax Roadster 9004		Full Rearward		Mid Position		Full Forward
		Century Next Step 4920		Full Rearward		Mid Position		Full Forward
		Cosco High Back Booster 02-442		Full Rearward		Mid Position		Full Forward
-	1.0	Evenflo Right Fit 245	Ļ	Full Rearward		Mid Position		Full Forward
X	19.	Suppression tests with 6-year-orm. Middle, and Rearward seat trace		• (	2, Su	ibpart N) in the	tollov	wing Forward,
1	Χ	Sitting on seat with back against se	-					
	X	Sitting on seat with back against re			222	2)		
	X	Sitting on seat edge, spine vertical,		· ·		•		
	X	Sitting back in the seat and leaning		•		` '	١	
	20.	Suppression tests with represen			•	•		ons
	20.	Sitting on seat with back against se		•				0110
		Sitting on seat with back against re			2.2.2.	2)		
		Sitting on seat edge, spine vertical,		,		•		
		Sitting back in the seat and leaning	on t	he right front pas	seng	er door (S24.2.3)	)	
X	21.	Test of Reactivation of the Pass	seng	er Air Bag Syst	tem v	with an Unbelted	d 5 <sup>th</sup>	percentile
	l e	female dummy (S20.3, 22.3, S2	4 3	Perform this t	est a	fter the followin	a em	nnroccion
				. I CHOITH tills t	001 0	inter the following	y su	ppression
	00	tests: After each restraint.	,					•
	22.	tests: After each restraint.  Test of Reactivation of the pass	eng	er air bag syste	em w	ith a representa	ative	5 <sup>th</sup> percentile
	1	tests: After each restraint.  Test of Reactivation of the pass female (S20.3, 22.3, S24.3). Pe	eng erfori	er air bag syste n this test after	em w	ith a representa following suppre	ative essio	5 <sup>th</sup> percentile on tests:
	22. 23.	tests: After each restraint.  Test of Reactivation of the pass female (S20.3, 22.3, S24.3). Pethodological Low risk deployment test with 1	eng erfori 2-m	er air bag syste n this test after	em w	ith a representa following suppre	ative essio	5 <sup>th</sup> percentile on tests:
	1	tests: After each restraint.  Test of Reactivation of the pass female (S20.3, 22.3, S24.3). Per Low risk deployment test with 1 following indicated child restrain	eng erfori 2-m	er air bag syste n this test after	em w	ith a representa following suppre	ative essio	5 <sup>th</sup> percentile on tests:
	1	tests: After each restraint.  Test of Reactivation of the pass female (S20.3, 22.3, S24.3). Pethodological Low risk deployment test with 1	eng erfori 2-m	er air bag syste n this test after	em w	ith a representa following suppre	ative essio	5 <sup>th</sup> percentile on tests:
	1	tests: After each restraint.  Test of Reactivation of the pass female (S20.3, 22.3, S24.3). Peter Low risk deployment test with 1 following indicated child restrain Section B	eng erfori 2-m	er air bag syste n this test after onth-old dumm	em w	ith a representa following suppre art 572, Subpart	ative essio	5 <sup>th</sup> percentile on tests: using the
	1	tests: After each restraint.  Test of Reactivation of the pass female (S20.3, 22.3, S24.3). Per Low risk deployment test with 1 following indicated child restrain Section B  Britax Handle with Care 191	eng erfori 2-m	er air bag syste m this test after onth-old dumm Full Rearward	em w	ith a representa following suppre art 572, Subpart Mid Position	ative essio	5 <sup>th</sup> percentile on tests: using the
	1	tests: After each restraint.  Test of Reactivation of the pass female (S20.3, 22.3, S24.3). Per Low risk deployment test with 1 following indicated child restrain Section B  Britax Handle with Care 191  Century Assura 4553	eng erfori 2-m	er air bag syste m this test after onth-old dumm Full Rearward Full Rearward	em w	ith a representa following suppre art 572, Subpart Mid Position Mid Position	ative essio	5 <sup>th</sup> percentile on tests: using the  Full Forward Full Forward
	1	tests: After each restraint.  Test of Reactivation of the pass female (S20.3, 22.3, S24.3). Pet Low risk deployment test with 1 following indicated child restrain Section B  Britax Handle with Care 191  Century Assura 4553  Century Avanta SE 41530	eng erfori 2-m	er air bag system this test after onth-old dumm  Full Rearward Full Rearward Full Rearward	em w	ith a representa following suppre art 572, Subpart Mid Position Mid Position Mid Position	ative essio	5 <sup>th</sup> percentile on tests: using the  Full Forward Full Forward Full Forward
	1	tests: After each restraint.  Test of Reactivation of the pass female (S20.3, 22.3, S24.3). Pet Low risk deployment test with 1 following indicated child restrain Section B  Britax Handle with Care 191  Century Assura 4553  Century Avanta SE 41530  Century Smart Fit 4543  Cosco Arriva 02727  Cosco Opus 35 02603	eng erfori 2-m	er air bag system this test after onth-old dumm Full Rearward Full Rearward Full Rearward Full Rearward	em w	ith a representa following suppre art 572, Subpart Mid Position Mid Position Mid Position Mid Position	ative essio	5 <sup>th</sup> percentile on tests: using the  Full Forward Full Forward Full Forward Full Forward
	1	tests: After each restraint.  Test of Reactivation of the pass female (S20.3, 22.3, S24.3). Peter Low risk deployment test with 1 following indicated child restrain Section B  Britax Handle with Care 191  Century Assura 4553  Century Avanta SE 41530  Century Smart Fit 4543  Cosco Arriva 02727  Cosco Opus 35 02603  Evenflo Discovery Adjust Right	eng erfori 2-m	er air bag system this test after onth-old dumm  Full Rearward Full Rearward Full Rearward Full Rearward Full Rearward Full Rearward	em w	ith a representa following suppre art 572, Subpart Mid Position Mid Position Mid Position Mid Position Mid Position	ative essio	5 <sup>th</sup> percentile on tests: using the  Full Forward Full Forward Full Forward Full Forward Full Forward
	1	tests: After each restraint.  Test of Reactivation of the pass female (S20.3, 22.3, S24.3). Pet Low risk deployment test with 1 following indicated child restrain Section B  Britax Handle with Care 191  Century Assura 4553  Century Avanta SE 41530  Century Smart Fit 4543  Cosco Arriva 02727  Cosco Opus 35 02603	eng erfori 2-m	er air bag system this test after onth-old dumm  Full Rearward	em w	ith a representa following suppre art 572, Subpart Mid Position Mid Position Mid Position Mid Position Mid Position Mid Position	ative essio	5 <sup>th</sup> percentile on tests: using the  Full Forward
	1	tests: After each restraint.  Test of Reactivation of the pass female (S20.3, 22.3, S24.3). Petalow risk deployment test with 1 following indicated child restrain Section B  Britax Handle with Care 191  Century Assura 4553  Century Avanta SE 41530  Century Smart Fit 4543  Cosco Arriva 02727  Cosco Opus 35 02603  Evenflo Discovery Adjust Right 212  Evenflo First Choice 204  Evenflo On My Way Position	eng erfori 2-m	er air bag system this test after onth-old dumm  Full Rearward	em w	ith a representate following suppresent 572, Subpart Mid Position	ative essio	5 <sup>th</sup> percentile on tests: using the  Full Forward
	1	tests: After each restraint.  Test of Reactivation of the pass female (S20.3, 22.3, S24.3). Petalow risk deployment test with 1 following indicated child restrain Section B  Britax Handle with Care 191  Century Assura 4553  Century Avanta SE 41530  Century Smart Fit 4543  Cosco Arriva 02727  Cosco Opus 35 02603  Evenflo Discovery Adjust Right 212  Evenflo First Choice 204  Evenflo On My Way Position Right V 282	eng erfori 2-m	er air bag system this test after onth-old dumm  Full Rearward	em w	ith a represental following suppresent 572, Subpart Mid Position	ative essio	Full Forward
	1	tests: After each restraint.  Test of Reactivation of the pass female (S20.3, 22.3, S24.3). Peters of the pass female (S20.3, S24.3). Pete	eng erfori 2-m	er air bag system this test after onth-old dumm  Full Rearward	em w	ith a representate following suppresent 572, Subpart Mid Position	ative essio	5 <sup>th</sup> percentile on tests: using the  Full Forward
	1	tests: After each restraint.  Test of Reactivation of the pass female (S20.3, 22.3, S24.3). Petalow risk deployment test with 1 following indicated child restrain Section B  Britax Handle with Care 191  Century Assura 4553  Century Avanta SE 41530  Century Smart Fit 4543  Cosco Arriva 02727  Cosco Opus 35 02603  Evenflo Discovery Adjust Right 212  Evenflo First Choice 204  Evenflo On My Way Position Right V 282	eng erfori 2-m	er air bag system this test after onth-old dumm  Full Rearward	em w	ith a represental following suppresent 572, Subpart Mid Position	ative essio	5 <sup>th</sup> percentile on tests: using the  Full Forward
	1	tests: After each restraint.  Test of Reactivation of the pass female (S20.3, 22.3, S24.3). Peters of the pass female (S20.3, S24.3). Pete	eng erfori 2-m	er air bag system this test after onth-old dumm  Full Rearward	em w	ith a representate following suppresent 572, Subpart Mid Position	ative essio	Full Forward
	1	tests: After each restraint.  Test of Reactivation of the pass female (S20.3, 22.3, S24.3). Petalow risk deployment test with 1 following indicated child restrain Section B  Britax Handle with Care 191  Century Assura 4553  Century Avanta SE 41530  Century Smart Fit 4543  Cosco Arriva 02727  Cosco Opus 35 02603  Evenflo Discovery Adjust Right 212  Evenflo First Choice 204  Evenflo On My Way Position Right V 282  Graco Infant 8457  Section C  Britax Roundabout 161	eng erfori 2-m	er air bag system this test after onth-old dumm  Full Rearward	em w	ith a represental following suppresent 572, Subpart Mid Position	ative essio	Full Forward
	1	tests: After each restraint.  Test of Reactivation of the pass female (S20.3, 22.3, S24.3). Petalow risk deployment test with 1 following indicated child restrain Section B  Britax Handle with Care 191  Century Assura 4553  Century Avanta SE 41530  Century Smart Fit 4543  Cosco Arriva 02727  Cosco Opus 35 02603  Evenflo Discovery Adjust Right 212  Evenflo First Choice 204  Evenflo On My Way Position Right V 282  Graco Infant 8457  Section C  Britax Roundabout 161  Century Encore 4612	eng erfori 2-m	er air bag system this test after onth-old dumm  Full Rearward	em w	ith a representate following suppresent 572, Subpart Mid Position	ative essio	Full Forward
	1	tests: After each restraint.  Test of Reactivation of the pass female (S20.3, 22.3, S24.3). Peters of the pass female (S20.3, 22.3, S24.3). Peters of the property of the pass female (S20.3, 22.3, S24.3). Peters of the pass female (S20.3, 22.3, S24.3). Peters of the pass female (S20.3, S24.3). Peters of the pass female (S20.3, S20.3, S20.3).  Britax Handle with Care 191 Century Assura 4553 Century Avanta SE 41530 Century Smart Fit 4543 Cosco Arriva 02727 Cosco Opus 35 02603 Evenflo Discovery Adjust Right 212 Evenflo First Choice 204 Evenflo On My Way Position Right V 282 Graco Infant 8457 Section C Britax Roundabout 161 Century Encore 4612 Century STE 1000 4416	eng erfori 2-m	er air bag system this test after onth-old dumm  Full Rearward	em w	ith a representate following suppresent 572, Subpart Mid Position	ative essio	Full Forward
	1	tests: After each restraint.  Test of Reactivation of the pass female (S20.3, 22.3, S24.3). Peters of the pass female (S20.3, 22.3, S24.3). Peters of the property of the pass female (S20.3, 22.3, S24.3). Peters of the pass female (S20.3, 22.3, S24.3). Peters of the pass female (S20.3, S24.3). Peters of the pass female (S20.3, S20.3, S20.3).  Britax Handle with Care 191 Century Assura 4553 Century Avanta SE 41530 Century Smart Fit 4543 Cosco Arriva 02727 Cosco Opus 35 02603 Evenflo Discovery Adjust Right 212 Evenflo First Choice 204 Evenflo On My Way Position Right V 282 Graco Infant 8457 Section C Britax Roundabout 161 Century Encore 4612 Century STE 1000 4416 Cosco Olympian 02803	eng erfori 2-m	er air bag system this test after onth-old dumm  Full Rearward	em w	ith a represental following suppresent 572, Subpart Mid Position	ative essio	Full Forward



# DATA SHEET 2 REPORT OF VEHICLE CONDITION

Test Vehicle: 2008 Toyota Scion XB NHTSA No.: C85100 5/9/08 - 07/1/08 Test Program: FMVSS 208 Compliance Test Dates: CONTRACT NO.: DTNH22-03-D-11002 Date: 7/7/08 FROM (Lab and rep name): MGA Research Corporation TO: NHTSA, OVSC (NVS-220) PURPOSE: (X) Initial Receipt ( ) Received via Transfer (X) Present vehicle condition MODEL YEAR/MAKE/MODEL/BODY STYLE: 2008 Toyota Scion XB4 Door MANUFACTURE DATE: 11/07 <u>C8</u>5100 **GVWR**: NHTSA NO. 1860 kg (4105 lbs) **BODY COLOR:** 1030 kg (2270 lbs) Blue GAWR (Fr): JTLKE50E381050064 VIN: GAWR (Rr): 855 kg (1880 lbs) **ODOMETER READINGS:** ARRIVAL (miles): 44 DATE: 2/4/08 COMPLETION (miles): 49 DATE: 7/1/08 PURCHASE PRICE: (\$) **\$16,643** Gentile Motor Group, P.O. Box 080977, Racine, WI 53408 DEALER'S NAME: A. All options listed on window sticker are present on the test vehicle: X Yes No B. Tires and wheel rims are new and the same as listed: No X Yes C. There are no dents or other interior or exterior flaws: X Yes No D. The vehicle has been properly prepared and is in running condition: X Yes No E. Keyless remote is available and working: X Yes No F. The glove box contains an owner's manual, warranty document, consumer information, and extra set of keys: X Yes No Proper fuel filler cap is supplied on the test vehicle: G. X Yes Н. Using permanent marker, identify vehicle with NHTSA number and FMVSS test type(s) on roof line above driver door or for school buses, place a placard with NHTSA number inside the windshield and to the exterior front and rear side of bus: X Yes No Place vehicle in storage area: I. X Yes No Inspect the vehicle's interior and exterior, including all windows, seats, doors, etc. to J. confirm that each system is complete and functional per the manufacturer's specifications. Any damage, misadjustment, or other unusual condition that could influence the test program or test results shall be recorded. Report any abnormal condition to the NHTSA COTR before beginning any test: Conditions reported below X Vehicle OK

# REPORT OF VEHICLE CONDITION AT THE COMPLETION OF TESTING

LIST OF FMVSS TEST	TS PERFORMED BY THIS LAB:	FMVSS 208, 212,	<u>219, 301</u>
VEHICLE:	2008 Toyota Scion XB	NHTSA NO.:	<u>C85100</u>
REMARKS:			
Equipment that is no lo	onger on the test vehicle as noted o	n previous page:	
Rear carpet, spare tire	<u>, jack and tools</u>		
Explanation for equipm	nent removal:		
Components removed	for instrumentation installation and	to meet target weig	<u>aht.</u>
Test Vehicle Condition	:		
25 mph frontal impact	damage- front suspension & structu	<u>ire damaged, hood</u>	& front quarter
panels damaged, radia	ator damaged, air bags & pretension	ners deployed, Stoc	ddard in fuel system
RECORDED BY:	<u>Jeff Lewandowski</u>	DATE:	7/7/2008
APPROVED BY:	David Winkelbauer	DATE:	<u>7/7/2008</u>
###########	###############	+###########	##########
<del>-</del>	RELEASE OF TEST VE	_	
The vehicle described	above is released from MGA to be	delivered to:	
Date:	Time:	Odometer:	
Lab Rep's Signature:	Time.	Odometer.	
Title:			
Carrier/Customer Rep:			
Date:			

### **CERTIFICATION LABEL AND TIRE PLACARD INFORMATION**

Test Vehicle:  $\underline{2008 \text{ Toyota Scion XB}}$  NHTSA No.:  $\underline{C85100}$  Test Program:  $\underline{FMVSS 208 \text{ Compliance}}$  Test Date:  $\underline{7/1/08}$ 

Test Technician: <u>Jamie Aide</u>

Certification Label		
Manufacturer:	Toyota Motor Corporation	
Date of Manufacture:	11/07	
VIN:	JTLKE50E381050064	
Vehicle Certified As (Pass. Car/MPV/Truck/Bus):	MPV	
Front Axle GVWR:	1030 kg (2270 lbs)	
Rear Axle GVWR:	855 kg (1880 lbs)	
Total GVWR:	1860 kg (4105 lbs)	

Tire Placard		
Not applicable, vehicle is not a passenger car and does not have a tire placard.	YES (MPV)	
This is not a passenger car, but all or part of this information is still contained on a vehicle label and is reported here.	YES (MPV)	
Vehicle Capacity Weight:	385 kg (850 lbs)	
Designated Seating Capacity Front:	2	
Designated Seating Capacity Rear:	3	
Total Designated Seating Capacity:	5	
Recommended Cold Tire Inflation Pressure Front:	240 kpa (35 psi)	
Recommended Cold Tire Inflation Pressure Rear:	220 kpa (32 psi)	
Recommended Tire Size:	P205/55R16	

Signature: 

Amic C.S.

Date: <u>7/1/08</u>

#### **REAR OUTBOARD SEATING POSITION SEAT BELTS**

Test Vehicle:2008 Toyota Scion XBNHTSA No.:C85100Test Program:FMVSS 208 ComplianceTest Date:5/15/08

Test Technician: Wayne Dahlke

	Yes	No
Do all rear outboard seating positions have Type 2 seat belts?	X	

If NO, describe the seat belt installed, the seat location, and any other information about the seat that would explain why a Type 2 seat belt was not installed.

**REMARKS**:

Signature: Wayne Tahlk

Date: <u>5/15/08</u>

### AIR BAG LABELS (S4.5.1)

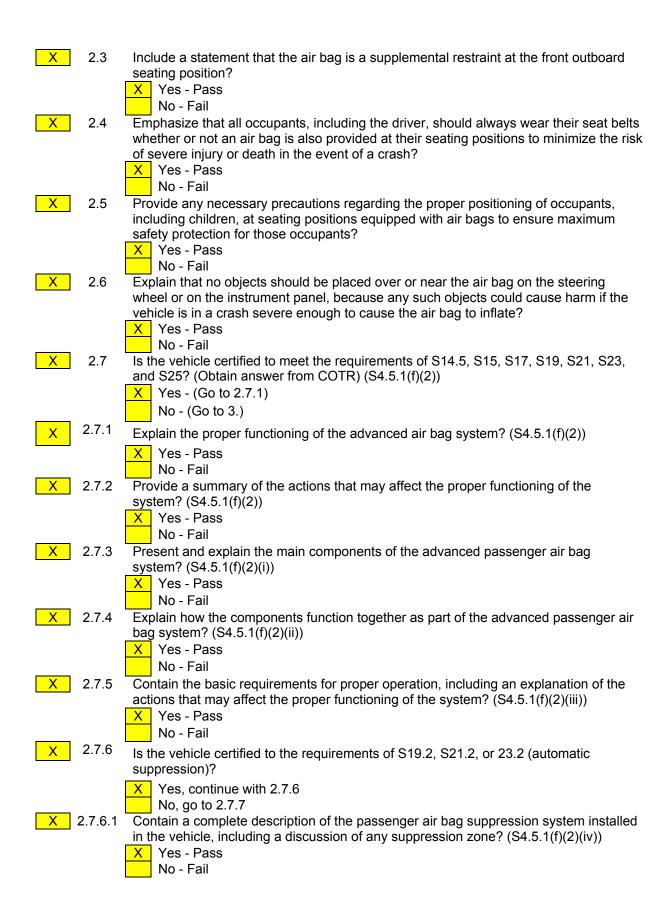
NHTSA No.:

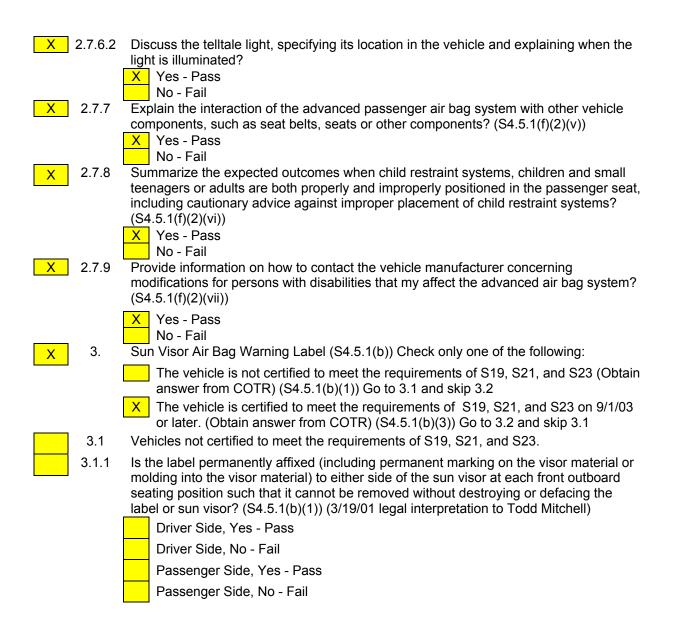
C85100

2008 Toyota Scion XB

Test Vehicle:

Test Program: FMVSS 208 Compliance Test Date: 5/15/08 Test Technician: Wayne Dahlke Air bag maintenance label and owner's manual instructions: (S4.5.1(a)) 1. 1.1 Does the manufacturer recommend periodic maintenance or replacement of the air bag? Yes, go to 1.2 No - go to 2 1.2 Does the vehicle have a label specifying air bag maintenance or replacement? Yes - Pass No - Fail Does the label contain one of the following? 1.3 Yes - Pass No - Fail Check applicable schedule: \_\_ Schedule on label specifies month and year (Record date\_\_\_ \_\_ Schedule on label specified vehicle mileage (Record mileage ) Schedule on label specifies interval measured from date on certification label (Record interval Is the label permanently affixed within the passenger compartment such that it cannot 1.4 be removed without destroying or defacing the label or the sunvisor? (3/19/01 legal interpretation to Todd Mitchell) Yes - Pass No - Fail 1.5 Is the label lettered in English? Yes - Pass No - Fail Is the label in block capitals and numerals? 1.6 Yes - Pass No - Fail 1.7 Are the letters and numerals at least 3/32 inches high? Yes - Pass No - Fail 1.8 Does the owner's manual set forth the recommended schedule for maintenance or replacement? 2. Does the owner's manual: (S4.5.1(f)) 2.1 Include a description of the vehicle's air bag system in an easily understandable format? X Yes - Pass No - Fail Χ 2.2 Include a statement that the vehicle is equipped with an air bag and a lap/shoulder belt at the front outboard seating position? Yes - Pass No - Fail





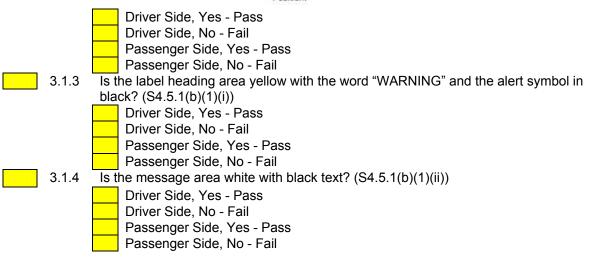
Does the label conform in content to the label shown in either Figure 6A or 6B (Figure 6b is for vehicles with passenger air bag on-off switches), as appropriate, at each front outboard seating position? (S4.5.1(b)(1)) (Vehicles without back seats may omit the statement: "The back seat is the safest place for children." (S4.5.1(b)(1)(iv))

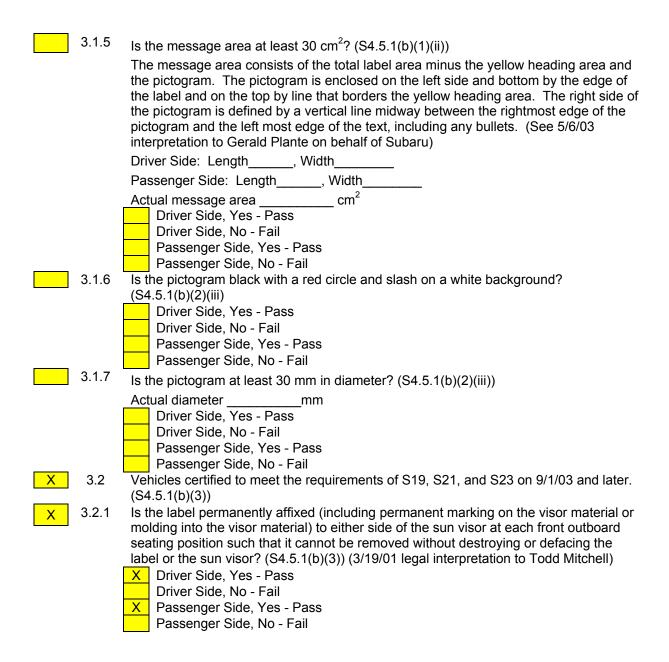


Figure 6a. Sun Visor Label Visible When Visor is in Down Position.



Figure 6b. Sun Visor Label Visible When Visor is in Down Position.

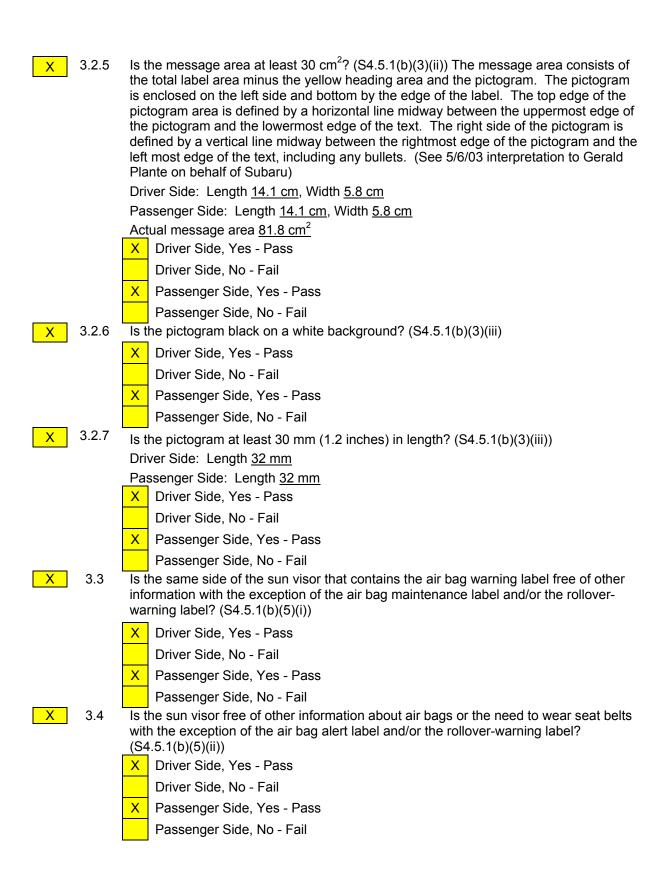


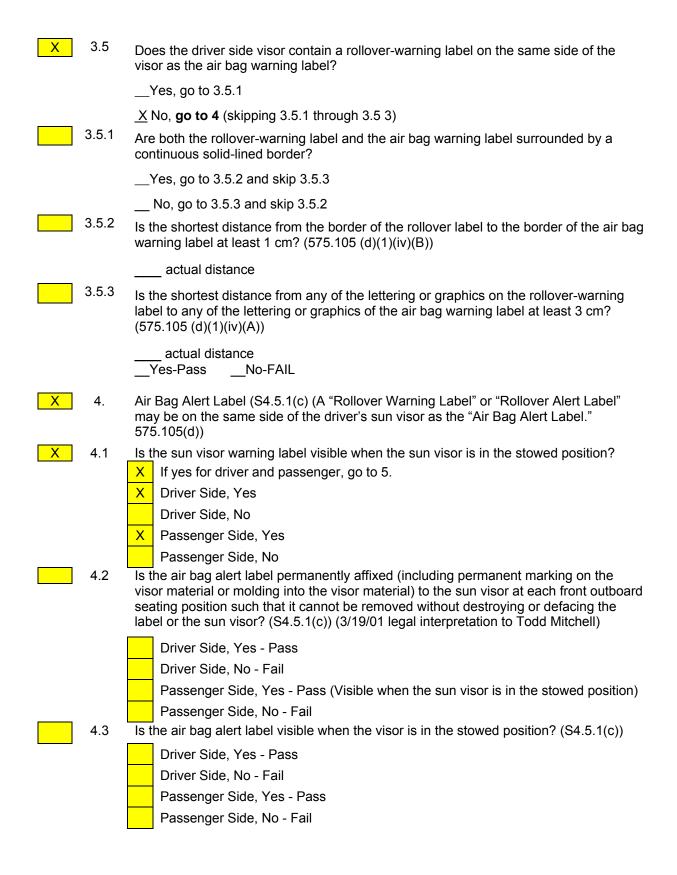


3.2.2 Does the label conform in content to the label shown in Figure 11 at each front outboard seating position? (S4.5.1(b)(2)) (Vehicles without back seats may omit the statement: "The back seat is the safest place for children." (S4.5.1(b)(3)(iv)) Vehicles without back seats or the back seat is too small to accommodate a rear-facing child restraint may omit the statement "Never put a rear-facing child seat in the front." (S4.5.1(b)(3)(v))



- X Driver Side, Yes Pass
- Driver Side, No Fail
- X Passenger Side, Yes Pass
  - Passenger Side, No Fail
- X 3.2.3 Is the label heading area yellow with the word "WARNING" and the alert symbol in black? (S4.5.1(b)(3)(i))
  - X Driver Side, Yes Pass
  - Driver Side, No Fail
  - X Passenger Side, Yes Pass
    - Passenger Side, No Fail
- x 3.2.4 Is the message area white with black text? (S4.5.1(b)(3)(ii))
  - X Driver Side, Yes Pass
  - Driver Side, No Fail
  - X Passenger Side, Yes Pass
    - Passenger Side, No Fail



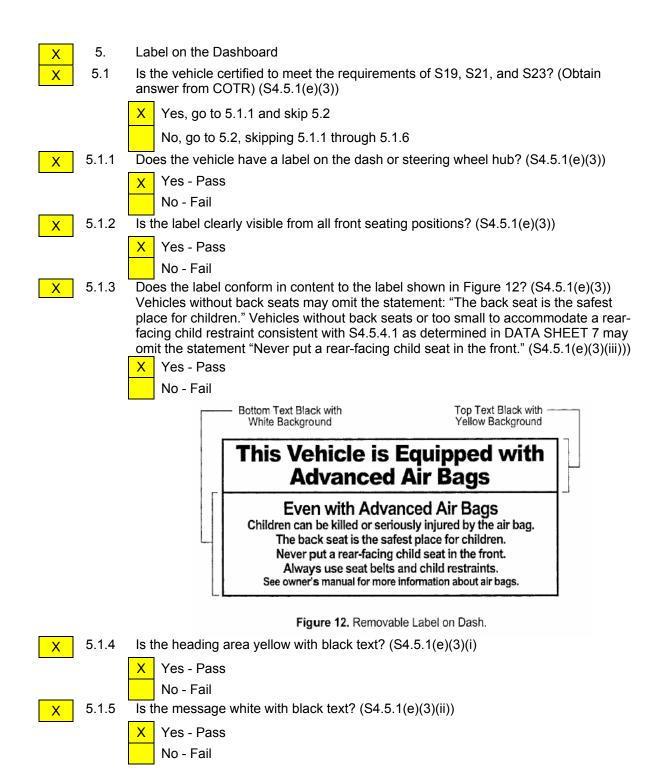


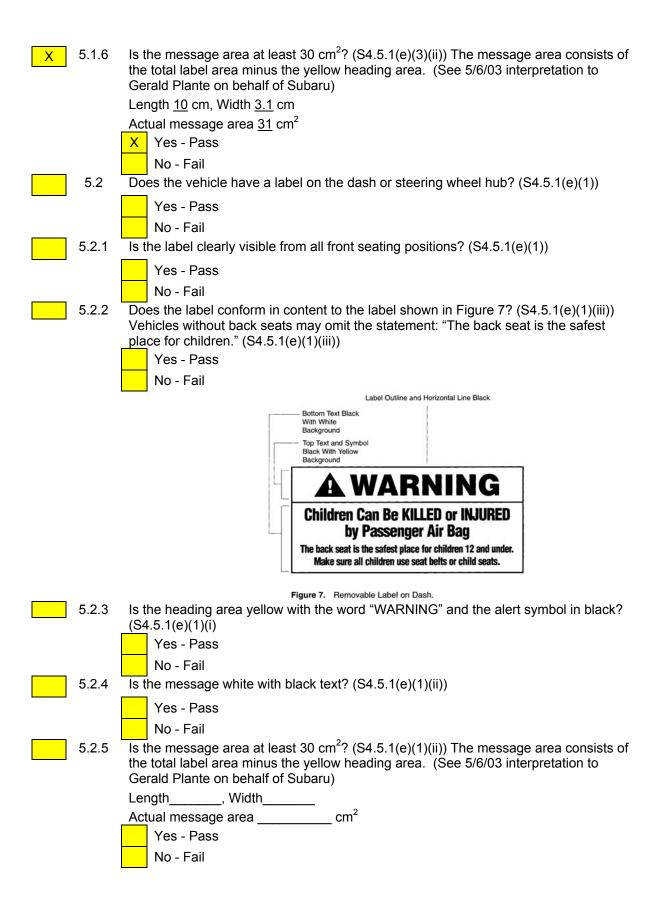
# 4.4 Does the label conform in content to the label shown in Figure 6C? (S4.5.1(c))



Figure 6c. Sun Visor Label Visible When Visor is in Up Position.

	Driver Side, Yes - Pass
	Driver Side, No - Fail
	Passenger Side, Yes - Pass
	Passenger Side, No - Fail
4.5	Is the message area black with yellow text? (S4.5.1(c)(1)
	Driver Side, Yes - Pass
	Driver Side, No - Fail
	Passenger Side, Yes - Pass
	Passenger Side, No - Fail
4.6	Is the message area at least 20 cm <sup>2</sup> ? (S4.5.1(c)(1)) The message area consists of the black part of the label.
	Driver Side: Length, Width
	Passenger Side: Length, Width
	Actual message area cm <sup>2</sup>
	Driver Side, Yes - Pass
	Driver Side, No - Fail
	Passenger Side, Yes - Pass
	Passenger Side, No - Fail
4.7	Is the pictogram black with a red circle and slash on a white background? (S4.5.1(c)(2))
	Driver Side, Yes - Pass
	Driver Side, No - Fail
	Passenger Side, Yes - Pass
	Passenger Side, No - Fail
4.8	Is the pictogram at least 20 mm in diameter? (S4.5.1(c)(2))
	Driver Side Diameter
	Passenger Side Diameter
	Driver Side, Yes - Pass
	Driver Side, No - Fail
	Passenger Side, Yes - Pass
	Passenger Side, No - Fail





I certify that I have read and performed each instruction.

Signature: Wayne Tahlk

Date: <u>5/15/08</u>

# **FMVSS 208 READINESS INDICATOR (S4.5.2)**

NHTSA No.: <u>C85100</u>

2008 Toyota Scion XB FMVSS 208 Compliance

Test Vehicle:

Test Program: Test Technician:			Test Date:	5/15/08
system	with	It restraint system that deploys in the event of a crash so a readiness indicator. A totally mechanical system is eat interpretation to Lawrence F. Hennegerger on behal	exempt from th	
X	1.	Is the system totally mechanical? If Yes, this data sheet is  Yes  X	complete.	
X	2.	Describe the location of the readiness indicator: Lower rigin	ht of cluster	
X	3.	Is the readiness indicator clearly visible to the driver?		
Α.		Yes - Pass No - Fail		
X	4.	Is a list of the elements in the occupant restraint system, be readiness indicator, provided on a label or in the owner's m		by the
		X Yes - Pass		
		No - Fail		
X	5.	Does the vehicle have an on-off switch for the passenger a	ıir bag?	
		If Yes, go to 6		
		X If No, this form is complete.		
	6.	Is the air bag readiness indicator off when the passenger a position?	ir bag switch is	in the off
		Yes - Pass		
		No - Fail		
REMA	RKS	3:		
I certify	y tha	at I have read and performed each instruction.		
Signat	ure:	Wayne Tahle		
Date:		5/15/08		

### PASSENGER AIR BAG MANUAL CUT-OFF DEVICE (\$4.5.4)

2008 Toyota Scion XB FMVSS 208 Compliance

Test Vehicle:

Test Program:

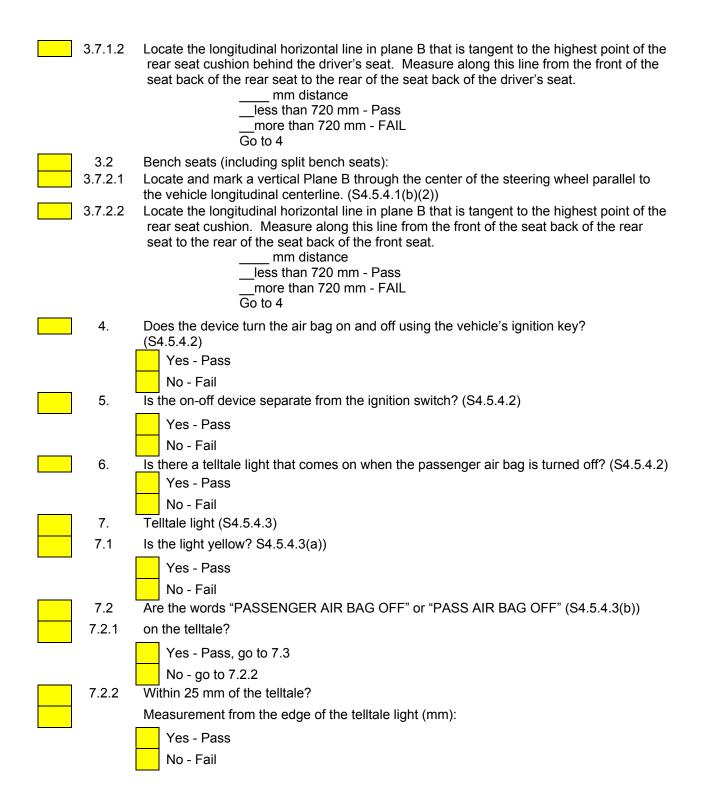
NHTSA No.:

Test Date:

C85100

5/15/08

Test Technician: Wayne Dahlke 1. Is the vehicle equipped with an on-off switch that deactivates the air bag installed at the right front outboard seating position? Yes, go to 2 Χ No, this sheet is complete Does the vehicle have any forward-facing rear designated seating positions? 2. (S4.5.4.1(a)) Yes, go to 3 No, go to 4 Verification there is room for a child restraint in the rear seat behind the driver's seat. 3. (S4.5.4.1(b)) Using all the controls that affect the fore-aft movement of the seat, move the seat to the 3.1 rearmost position. Mark this position. N/A, the seat does not have fore-aft adjustment 3.2 Using all the controls that affect the fore-aft movement of the seat, move the seat to the foremost position. Mark this position. N/A, the seat does not have fore-aft adjustment 3.3 Move the seat to the middle of the foremost and rearmost positions. (S8.1.2) N/A, the seat does not have a fore-aft adjustment If the driver's seat height is adjustable, use all the controls that affect height to put it in 3.4 the lowest position while maintaining the middle fore-aft position. (S8.1.2) N/A, No seat height adjustment Position the driver's seat adjustable lumbar supports so that the lumbar support is in its 3.5 lowest, retracted or deflated adjustment position. (S8.1.3) N/A, No lumbar adjustment 3.6 The driver's seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S4.5.4.1(b) and S8.1.3) N/A, No seat back angle adjustment Manufacturer's design driver's seat back angle Tested driver's seat back angle 3.7 Is the driver seat a bucket seat? \_\_ Yes, go to 3.7.1 and skip 3.7.2. \_\_ No, go to 3.7.2 and skip 3.7.1. 3.7.1 Bucket seats: 3.7.1.1 Locate and mark a vertical Plane B through the longitudinal centerline of the driver's seat cushion. The longitudinal centerline of a bucket seat cushion is determined at SgRP. (S16.3.1.10) (S4.5.4.1(b)(1))



	7.3	Does the telltale remain illuminated while the air bag is turned off? (S4.5.4.3c)) (Leave the air bag off for 5 minutes.)
		Yes - Pass
		No - Fail
	7.4	Is the telltale illuminated while the air bag is turned on? (S4.5.4.3(d))
		Yes - Fail
		No - Pass
	7.5	Is the telltale combined with the air bag readiness indicator? (S4.5.4.3(e))
		Yes - Fail
		No - Pass
	8.	Owner's Manual
	8.1	Does the owner's manual contain complete instructions on the operation of the on-off switch? (S4.5.4.4(a))
		Yes - Pass
		No - Fail
	8.2	Does the owner's manual contain a statement that the on-off switch should only be used when a member of one of the following risk groups is occupying the right front passenge seating position? (S4.5.4.4(b))  there is no back seat  Infants: the rear seat is too small to accommodate a child restraint there is a medical condition that must be monitored constantly
		Children there is no back seat aged space is not always available in the rear seat 1 to 12: there is a medical condition that must be monitored constantly Medical medical risk causes special risk for passenger condition: greater risk for harm than with the air bag on  Yes - Pass  No - Fail
	8.3	Does the owner's manual contain a warning about the safety consequences of
	[	using the on-off switch at other times?  Yes - Pass
		No - Fail
	Į	INO - Fall
REMA	RKS:	
I certify	y that I	have read and performed each instruction.
Signati	ure:	Warne Dahle
Date:		<u>5/15/08</u>

# LAP BELT LOCKABILITY

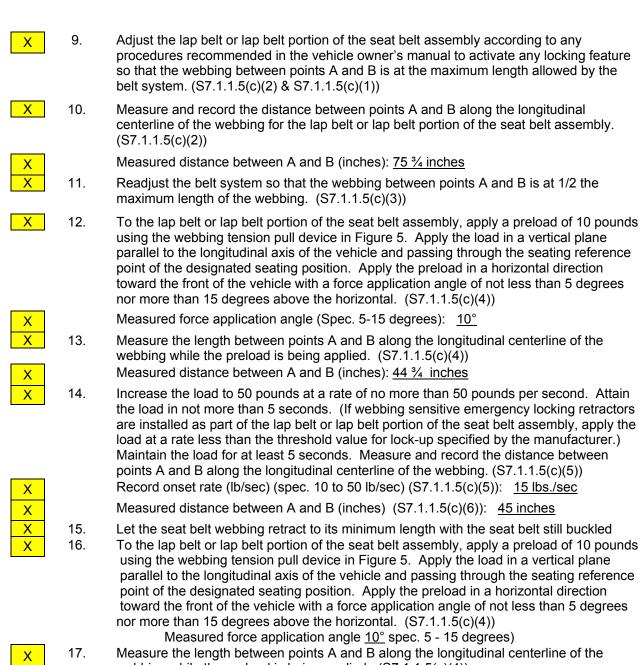
Passenger cars, trucks, buses, and multipurpose passenger Vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Test Vehicle:	2008 Toyota Scion XB	NHTSA No.:	C85100
Test Program:	FMVSS 208 Compliance	Test Date:	5/15/08
	147 5 1 11		

Test Technician: Wayne Dahlke

Complete one of these forms for **each** designated seating position that can be adjusted to forward-facing or that is a forward-facing seat, other than the driver's seat (S7.1.1.5(a), <u>and</u> that has seat belt retractors that are not solely automatic locking retractors. (S7.1.1.5(c))

DESIG	SNATE	O SEATING POSITION: Front Passenger
		N/A - no retractor is at this position N/A - the retractor is an automatic locking retractor ONLY
X	1.	Record test fore-aft seat position: Rear (S7.1.1.5(c)(1)) (Any position is acceptable)
X	2.	Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (\$7.1.1.5 (a))  Yes - Pass
X	3.	No - Fail  Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT require inverting, twisting or deforming of the belt webbing. (S7.1.1.5 (a))  X Yes - Pass No - Fail
X	4.	Place any adjustable seat belt anchorage in the lowest adjustment position.
		N/A The anchorage is not adjustable.
X	5.	Buckle the seat belt. (S7.1.1.5(c)(1))
	6.	Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))
X	7.	Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))
X	8.	Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?  X Yes, go to 8.1 No, go to 9.
X	8.1	Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))  X Yes - Pass No - Fail



webbing while the preload is being applied. (S7.1.1.5(c)(4))
Measured distance between A and B 28 3/4 inches

18. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5)) Record onset rate 15 lb/sec (spec. 10 to 50 lb/sec) (S7.1.1.5(c)(5)) Measured distance between A and B 29 1/4 inches (S7.1.1.5(c)(6)) Χ 19. Subtract the measurement in 13 from the measurement in 14 and the measurement in 17 from the measurement in 18. Is the difference 2 inches or less for both? (S7.1.1.5(c)(7)) $14-13 = 45 - 44 \frac{3}{4} = \frac{1}{4}$  inch  $18-17 = 29 \frac{1}{4} - 28 \frac{3}{4} = \frac{1}{2} \text{ inch}$ X Yes - Pass No - Fail Χ 20. Subtract the measurement in 14 from the measurement in 10 and the measurement in 18 from the measurement in 10. Is the difference 3 inches or more for both? (S7.1.1.5(c)(8)) $10-14 = 75 \frac{3}{4} - 45 = 30 \frac{3}{4}$  inches  $10-18 = 75 \frac{3}{4} - 29 \frac{1}{4} = 46 \frac{1}{2}$  inches

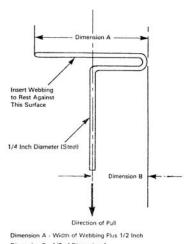
#### **REMARKS:**

I certify that I have read and performed each instruction.

Signature: Wayne Sahle

Yes - Pass No - Fail

Date: 5/15/08



Dimension B - 1/2 of Dimension A

Figure 5. - Webbing Tension Pull Device

### LAP BELT LOCKABILITY

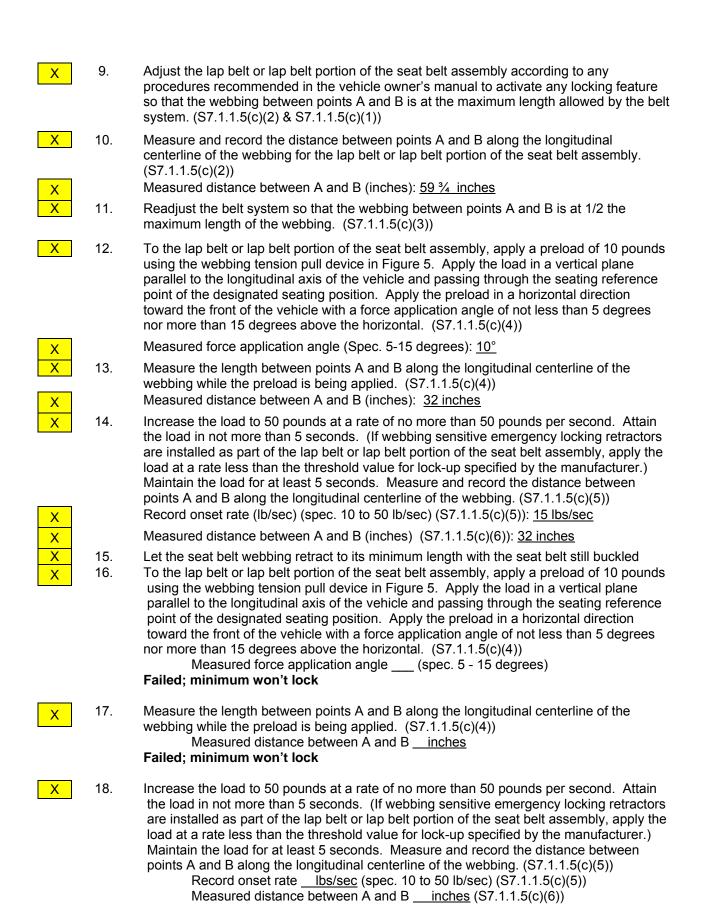
Passenger cars, trucks, buses, and multipurpose passenger Vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Test Vehicle:	2008 Toyota Scion XB	NHTSA No.:	<u>C85100</u>
Test Program:	FMVSS 208 Compliance	Test Date:	5/15/08
Toot Toobnicion:	Wayna Dahlka		

Test Technician: <u>Wayne Dahlke</u>

Complete one of these forms for **each** designated seating position that can be adjusted to forward-facing or that is a forward-facing seat, other than the driver's seat (S7.1.1.5(a), <u>and</u> that has seat belt retractors that are not solely automatic locking retractors. (S7.1.1.5(c))

DESI	ZNIATEI	D SEATING POSITION: Left Rear Passenger
DESI	SINAIL	D SEATING FOSITION. Leit Neal Fasselige
		N/A - no retractor is at this position
		N/A - the retractor is an automatic locking retractor ONLY
X	1.	Record test fore-aft seat position: FIXED
X	2.	(S7.1.1.5(c)(1)) (Any position is acceptable)  Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be
X	۷.	adjusted to forward-facing consist of a locking device that does NOT have to be attached
		by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle.
		(\$7.1.1.5 (a))  X Yes - Pass
		100 100
V	3.	No - Fail
X	ა.	Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT require inverting,
		twisting or deforming of the belt webbing. (S7.1.1.5 (a))
		X Yes - Pass
		No - Fail
X	4.	Place any adjustable seat belt anchorage in the lowest adjustment position.
		X N/A The anchorage is not adjustable.
X	5.	Buckle the seat belt. (S7.1.1.5(c)(1))
X	6.	Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))
X	7.	Locate a reference point B on the attachment hardware or retractor assembly at the other
X	8.	end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))  Does the vehicle user need to take some action to activate the locking feature on the lap
^	Ο.	belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to
		forward-facing?
		X Yes, go to 8.1
		No, go to 9.
X	8.1	Does the vehicle owner's manual include a description in words and/or diagrams
		describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the
		child restraint system. (S7.1.1.5(b))
		X Yes - Pass
		No - Fail



X 19. Subtract the measurement in 13 from the measurement in 14 and the measurement in 17 from the measurement in 18. Is the difference 2 inches or less for both? (S7.1.1.5(c)(7))

X 14-13 = 32 - 32 = 0 inch

18-17 = Failed; minimum won't lock

X Yes – Pass AT MAX LENGTH
X No – Fail AT MIN LENGTH

X 20. Subtract the measurement in 14 from the measurement in 10 and the measurement in 18 from the measurement in 10. Is the difference 3 inches or more for both?

(S7.1.1.5(c)(8))

 $10-14 = 59 \frac{3}{4} - 32 = 27 \frac{3}{4} \text{ inches}$ 

10-18 = Failed; minimum won't lock

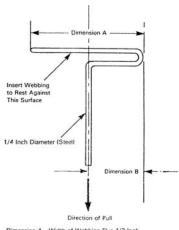
X Yes – Pass AT MAX LENGTH
X No – Fail AT MIN LENGTH

### **REMARKS:**

I certify that I have read and performed each instruction.

Signature: Wayne Table

Date: <u>5/15/08</u>



Dimension A - Width of Webbing Plus 1/2 Inch Dimension B - 1/2 of Dimension A

Figure 5. - Webbing Tension Pull Device

# LAP BELT LOCKABILITY

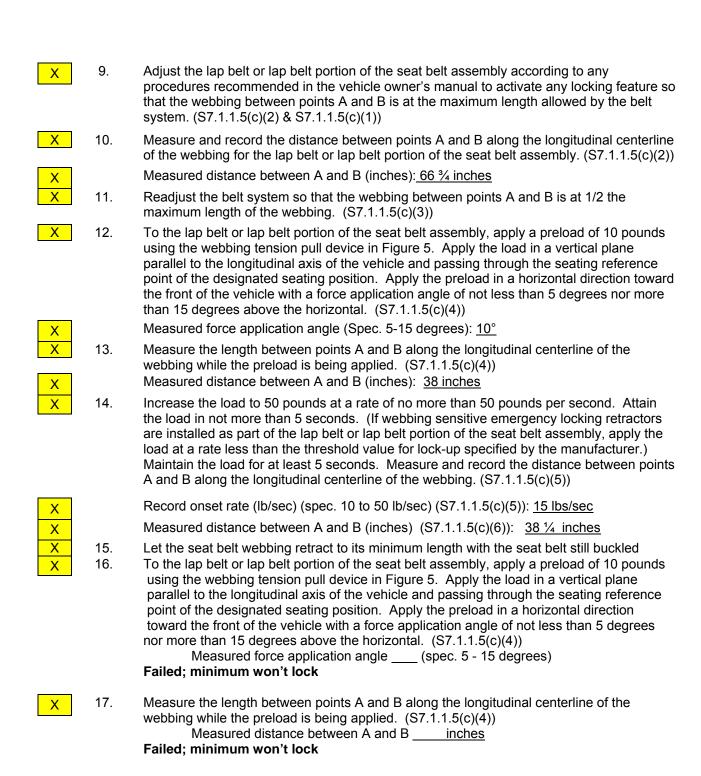
Passenger cars, trucks, buses, and multipurpose passenger Vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Test Vehicle:	2008 Toyota Scion XB	NHTSA No.:	C85100
Test Program:	FMVSS 208 Compliance	Test Date:	5/15/08

Test Technician: Wayne Dahlke

Complete one of these forms for **each** designated seating position that can be adjusted to forward-facing or that is a forward-facing seat, other than the driver's seat (S7.1.1.5(a), <u>and</u> that has seat belt retractors that are not solely automatic locking retractors. (S7.1.1.5(c))

DESI	GNATE	D SEATING POSITION: Center Rear Passenger
		N/A - no retractor is at this position N/A - the retractor is an automatic locking retractor ONLY
X	1.	Record test fore-aft seat position: <i>FIXED</i> (S7.1.1.5(c)(1)) (Any position is acceptable)
X	2.	Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does <b>NOT</b> have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5 (a))  X Yes - Pass No - Fail
X	3.	Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does <b>NOT</b> require inverting, twisting or deforming of the belt webbing. (S7.1.1.5 (a))  X Yes - Pass No - Fail
X	4.	Place any adjustable seat belt anchorage in the lowest adjustment position.
		X N/A The anchorage is not adjustable.
X	5.	Buckle the seat belt. (S7.1.1.5(c)(1))
X	6.	Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))
X	7.	Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))
X	8.	Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?  X Yes, go to 8.1 No, go to 9
X	8.1	Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))  X Yes - Pass No - Fail



X	18.	Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))  Record onset ratelb/sec_ (spec. 10 to 50 lb/sec) (S7.1.1.5(c)(5))  Measured distance between A and Binches_ (S7.1.1.5(c)(6))
X	19.	Subtract the measurement in 13 from the measurement in 14 and the measurement in 17 from the measurement in 18. Is the difference 2 inches or less for both? $(S7.1.1.5(c)(7))$ 14-13 = $38 \frac{1}{4} - 38 = \frac{1}{4}$ inch
X		18-17 = Failed; minimum won't lock
		X Yes - Pass AT MAX LENGTH X No - Fail AT MIN LENGTH
X	20.	Subtract the measurement in 14 from the measurement in 10 and the measurement in 18 from the measurement in 10. Is the difference 3 inches or more for both? $(S7.1.1.5(c)(8))$ $10-14 = \frac{66 \%}{4} - \frac{38 \%}{4} = \frac{28 \%}{2}$ inches
X		10-18 = Failed; minimum won't lock
		X Yes - Pass AT MAX LENGTH X No - Fail AT MIN LENGTH
REMA	ARKS:	Dimension A
I certi	fy that	I have read and performed each instruction.  Insert Webbing to Rest Against This Surface
Signa	iture:	Warper Stable

5/15/08

Date:

Figure 5. - Webbing Tension Pull Device

Dimension A - Width of Webbing Plus 1/2 Inch Dimension B - 1/2 of Dimension A

# LAP BELT LOCKABILITY

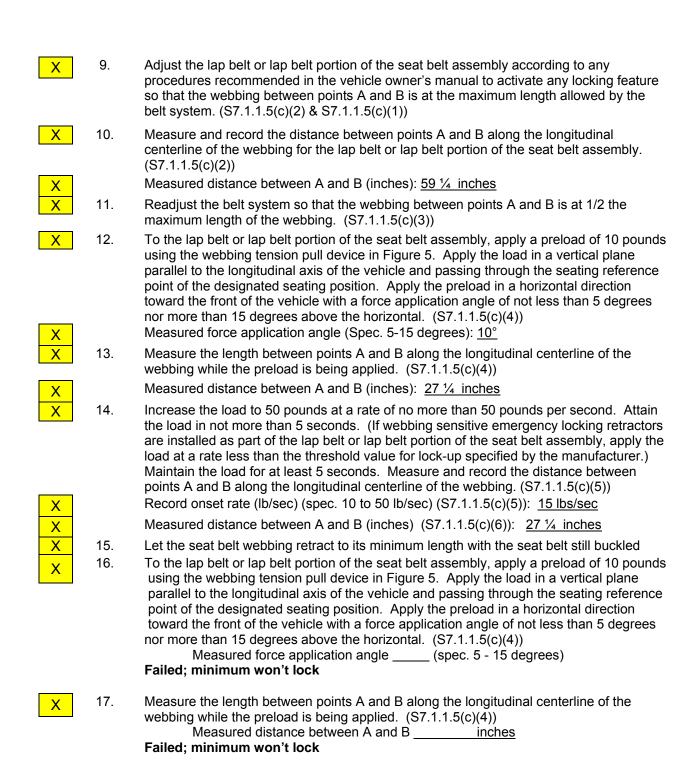
Passenger cars, trucks, buses, and multipurpose passenger Vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

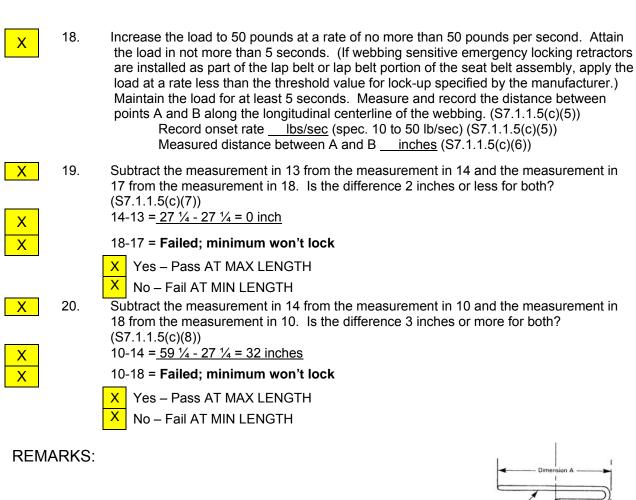
Test Vehicle:	2008 Toyota Scion XB	NHTSA No.:	C85100
Test Program:	FMVSS 208 Compliance	Test Date:	5/15/08
	147 5 1 11		

Test Technician: Wayne Dahlke

Complete one of these forms for **each** designated seating position that can be adjusted to forward-facing or that is a forward-facing seat, other than the driver's seat (S7.1.1.5(a), <u>and</u> that has seat belt retractors that are not solely automatic locking retractors. (S7.1.1.5(c))

DESIG	SNATE	D SEATING POSITION: Right Rear Passenger
		N/A - no retractor is at this position
		N/A - the retractor is an automatic locking retractor ONLY
X	1.	Record test fore-aft seat position: 5 <sup>th</sup> notch from full forward
<i>/</i> \		(S7.1.1.5(c)(1)) (Any position is acceptable)
X	2.	Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5 (a))  Yes - Pass
V	3.	No - Fail  Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be
X	3.	adjusted to forward-facing consist of a locking device that does NOT require inverting, twisting or deforming of the belt webbing. (S7.1.1.5 (a))
		X Yes - Pass
		No - Fail
X	4.	Place any adjustable seat belt anchorage in the lowest adjustment position.
		X N/A The anchorage is not adjustable.
X	5.	Buckle the seat belt. (S7.1.1.5(c)(1))
X	6.	Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))
X	7.	Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))
X	8.	Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?
		X Yes, go to 8.1
		No, go to 9.
X	8.1	Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))
		X Yes - Pass
		No - Fail





I certify that I have read and performed each instruction.

Signature:

5/15/08 Date:

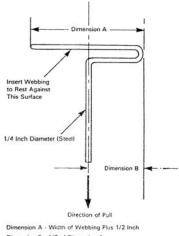


Figure 5. - Webbing Tension Pull Device

# FMVSS 208 SEAT BELT WARNING SYSTEM CHECK (S7.3)

Test Vehicle: 2008 Toyota Scion XB NHTSA No.: C85100
Test Program: FMVSS 208 Compliance Test Date: 5/15/08

Test Technician: Wayne Dahlke

X	1.	The occupant is in the driver's seat.
X	2.	The seat belt is in the stowed position.
X	3.	The key is in the "on" or "start" position.
X	4.	The time duration of the audible signal beginning with key "on" or "start" is
X		Seconds: 6
X	5.	The occupant is in the driver's seat.
X	6.	The seat belt is in the stowed position.
X	7.	The key is in the "on" or "start" position.
X	8.	The time duration of the warning light beginning with key "on" or "start" is
X		Seconds: Stays On
X	9.	The occupant is in the driver's seat.
X	10.	The seat belt is in the latched position and with at least 4 inches of belt webbing extended.
X	11.	The key is in the "on" or "start" position.
X	12.	The time duration of the warning light beginning with key "on" or "start" is
X		Seconds: 0
X	13.	Complete the following table with the data from 4, 8, and 12 to determine which option is used.

		Warning light	Warning light specification	Audible signal	Audible signal specification*
S7.3 (a)(1)	Belt stowed & key on or start	Item 8: Stays On	60 seconds minimum	Item 4: 6	4 to 8 seconds
\$7.2 (a)(2)	Belt latched & key on or start	Item 12: 0	4 to 8 seconds		
S7.3 (a)(2)	Belt stowed & key on or start	Item 8: Stay On	4 to 8 seconds	Item 4: 6	4 to 8 seconds

<sup>\* 49</sup> USCS @ 30124 does NOT allow an audible signal to operate for more than 8 seconds. A voluntary audible signal after the 4 to 8 second required signal may be provided. It must be differentiated from the required signal (5/25/2001 legal interpretation to Longacre and Associates).

X 1		e seat belt warning system meets the requirements of (manufacturers may comply h either section)  S7.3 (a)(1)  S7.3 (a)(2)  FAIL - does not meet the requirements of either option
X 1	5. No	te wording of visual warning: (S7.3(a)(1) and S7.3(a)(2))  Fasten seat belts  Fasten belts
REMAR	KS:	
I certify	that I ha	ve read and performed each instruction.
Signatur	re: <u></u>	rayue Tahle
Date:		<u>5/15/08</u>

## **BELT CONTACT FORCE (S7.4.3)**

Test Vehicle: 2008 Toyota Scion XB NHTSA No.: C85100
Test Program: FMVSS 208 Compliance Test Date: 5/15/08

Test Technician: Wayne Dahlke

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIG	SNATE	D SEATING POSITION: Left Front Driver
X	1.	Does the vehicle incorporate a webbing tension-relieving device?
		Yes, this form is complete
		X No, continue with this check sheet
X	2.	Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S8.1.3)
		X N/A, no lumbar adjustment
X	3.	Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2)
		X N/A, no additional support adjustment
X	4.	Is the fore-aft position of the seat adjustable?
		No- go to 5
		Yes - Put the seat in the mid fore-aft and full down height position determined in Data
X	5.	Sheet 14.2 Is the seat back angle adjustable?
^	5.	No- go to 6
		X Yes-Use the seat back angle determined in Data Sheet 14.2
X	6.	Position the test dummies according to dummy position placement instructions in
X	0.	Appendix F. Complete the Appendix F check sheets, but include them in the test report ONLY if there is a test failure.
X	7.	Fasten the seat belt latch.
X	8.	Pull either 12 inches of belt webbing or the maximum available amount of belt webbing,
		whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest.
X	9.	Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point pull the belt webbing out 3 inches
		from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Using a force measuring gage with a full scale range of no more than 1.5 pounds,
		measure the contact force perpendicular to the dummy's chest exerted by the belt
X		webbing. Contact Force (lb):
		X 0.0 to 0.7 pounds - Pass <u>0.5 lbs</u> .
		Greater than 0.7 pounds - Fail

I certify that I have read and performed each instruction.

Signature: Wayne Tahle

## **BELT CONTACT FORCE (S7.4.3)**

Test Vehicle:2008 Toyota Scion XBNHTSA No.:C85100Test Program:FMVSS 208 ComplianceTest Date:5/15/08

Test Technician: Wayne Dahlke

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIG	SNATE	D SEATING POSITION: Right Front Passenger
X	1.	Does the vehicle incorporate a webbing tension-relieving device?
		Yes, this form is complete
		X No, continue with this check sheet
X	2.	Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S8.1.3)
		X N/A, no lumbar adjustment
X	3.	Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2)
		X N/A, no additional support adjustment
X	4.	Is the fore-aft position of the seat adjustable?
		No- go to 5
		Yes - Put the seat in the mid fore-aft and full down height position determined in Data
X	5.	Sheet 14.2 Is the seat back angle adjustable?
	0.	No- go to 6
		X Yes-Use the seat back angle determined in Data Sheet 14.2
X	6.	Position the test dummies according to dummy position placement instructions in
		Appendix F. Complete the Appendix F check sheets, but include them in the test report ONLY if there is a test failure.
X	7.	Fasten the seat belt latch.
X	8.	Pull either 12 inches of belt webbing or the maximum available amount of belt webbing,
^	•.	whichever is less, from the retractor and then release it, allowing the belt webbing to
	0	return to the dummy's chest.
X	9.	Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point pull the belt webbing out 3 inches
		from the dummy's chest and release until it is within one inch from the dummy's chest.
		(\$10.8) Using a force measuring gage with a full scale range of no more than 1.5 pounds,
		measure the contact force perpendicular to the dummy's chest exerted by the belt webbing.
X		Contact Force (lb):
		X 0.0 to 0.7 pounds - Pass <u>0.6 lbs</u> .
		Greater than 0.7 pounds - Fail

I certify that I have read and performed each instruction.

Signature: Wayne graphle

# **BELT CONTACT FORCE (\$7.4.3)**

Test Vehicle:  $\underline{2008 \text{ Toyota Scion XB}}$  NHTSA No.:  $\underline{C85100}$  Test Program:  $\underline{FMVSS 208 \text{ Compliance}}$  Test Date:  $\underline{5/15/08}$ 

Test Technician: Wayne Dahlke

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIGNATED SEATING POSITION: Left Rear Passenger			
L			
X	1.	Does the vehicle incorporate a webbing tension-relieving device?	
<u> </u>		Yes, this form is complete	
		X No, continue with this check sheet	
X	2.	Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S8.1.3)	
		X N/A, no lumbar adjustment	
X	3.	Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2)	
		X N/A, no additional support adjustment	
X	4.	Is the fore-aft position of the seat adjustable?	
		X No- go to 5	
		Yes - Put the seat in the mid fore-aft and full down height position determined in Data Sheet 14.2	
X	5.	Is the seat back angle adjustable?	
		X No- go to 6	
		Yes-Use the seat back angle determined in Data Sheet 14.2	
X	6.	Position the test dummies according to dummy position placement instructions in Appendix F. Complete the Appendix F check sheets, but include them in the test report ONLY if there is a test failure.	
X	7.	Fasten the seat belt latch.	
X	8.	Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to	
		return to the dummy's chest.	
X	9.	Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point pull the belt webbing out 3 inches	
		from the dummy's chest and release until it is within one inch from the dummy's chest.	
		(S10.8) Using a force measuring gage with a full scale range of no more than 1.5 pounds,	
		measure the contact force perpendicular to the dummy's chest exerted by the belt webbing.	
X		Contact Force (lb):	
		X 0.0 to 0.7 pounds - Pass <u>0.6 lbs</u> .	
		Greater than 0.7 pounds - Fail	

I certify that I have read and performed each instruction.

Signature: Wayne Sahle

# **BELT CONTACT FORCE (S7.4.3)**

Test Vehicle:2008 Toyota Scion XBNHTSA No.:C85100Test Program:FMVSS 208 ComplianceTest Date:5/15/08

Test Technician: Wayne Dahlke

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIG	DESIGNATED SEATING POSITION: Center Rear Passenger			
X	1.	Does the vehicle incorporate a webbing tension-relieving device?		
		Yes, this form is complete		
		X No, continue with this check sheet		
X	2.	Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S8.1.3)		
		X N/A, no lumbar adjustment		
X	3.	Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2)		
		X N/A, no additional support adjustment		
X	4.	Is the fore-aft position of the seat adjustable?		
		X No- go to 5		
		Yes - Put the seat in the mid fore-aft and full down height position determined in Data Sheet 14.2		
X	5.	Is the seat back angle adjustable?		
		X No- go to 6		
		Yes-Use the seat back angle determined in Data Sheet 14.2		
X	6.	Position the test dummies according to dummy position placement instructions in Appendix F. Complete the Appendix F check sheets, but include them in the test report ONLY if there is a test failure.		
X	7.	Fasten the seat belt latch.		
X	8.	Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest.		
X	9.	Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Using a force measuring gage with a full scale range of no more than 1.5 pounds, measure the contact force perpendicular to the dummy's chest exerted by the belt webbing.		
X		Contact Force (lb):		
		X 0.0 to 0.7 pounds - Pass 0.4 lbs.		
		Greater than 0.7 pounds - Fail		

I certify that I have read and performed each instruction.

Signature: Wayne Jahle

## **BELT CONTACT FORCE (S7.4.3)**

Test Vehicle:2008 Toyota Scion XBNHTSA No.:C85100Test Program:FMVSS 208 ComplianceTest Date:5/15/08

Test Technician: Wayne Dahlke

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIGNATED SEATING POSITION: Right Rear Passenger			
		Does the vehicle incomparate a walking tension religions device?	
X	1.	Does the vehicle incorporate a webbing tension-relieving device?	
		Yes, this form is complete	
Χ	2.	X No, continue with this check sheet  Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest,	
	۷.	retracted or deflated adjustment position. (S8.1.3)	
		X N/A, no lumbar adjustment	
X	3.	Position any adjustable parts of the seat that provide additional support so that they are in	
		the lowest or most open adjustment position. (S16.2.10.2)  X N/A, no additional support adjustment	
X	4.	Is the fore-aft position of the seat adjustable?	
X	••	X No- go to 5	
		Yes – Put the seat in the mid fore-aft and full down height position determined in	
		Data Sheet 14.2	
X	5.	Is the seat back angle adjustable?	
		X No- go to 6	
V	0	Yes-Use the seat back angle determined in Data Sheet 14.2	
X	6.	Position the test dummies according to dummy position placement instructions in Appendix F. Complete the Appendix F check sheets, but include them in the test	
		report ONLY if there is a test failure.	
X	7.	Fasten the seat belt latch.	
X	8.	Pull either 12 inches of belt webbing or the maximum available amount of belt webbing,	
		whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest.	
X	9.	Locate the point where the centerline of the upper torso belt webbing crosses the	
		midsagittal line on the dummy's chest. At that point pull the belt webbing out 3 inches	
		from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Using a force measuring gage with a full scale range of no more than 1.5 pounds,	
		measure the contact force perpendicular to the dummy's chest exerted by the belt	
		webbing.	
X		Contact Force (lb):	
		0.0 to 0.7 pounds – Pass <u>0.5 lbs.</u>	
		Greater than 0.7 pounds - Fail	

I certify that I have read and performed each instruction.

Signature: Wayne Jahle

# LATCH PLATE ACCESS (S7.4.4)

Test Vehicle: 2008 Toyota Scion XB NHTSA No.: C85100
Test Program: FMVSS 208 Compliance Test Date: 5/15/08

Test Technician: Wayne Dahlke

Test all front outboard seat belts **other than those in** walk-in van-type vehicles and those at front outboard designated seating positions in **passenger cars**. Complete a form for each applicable seat belt.

applicable seat belt.				
DESIGNATED SEATING POSITION: Left Front Driver				
X	1.	Put the seat in the forwardmost fore-aft and full down height position determined in Data Sheet 14.2. (S10.7)		
X X	2. 3.	Put the seat back angle in the position determined in Data Sheet 14.2. Position the test dummy using the procedures in Appendix F. (Some modifications to the positioning procedure may need to be made because the seat is in its forward most position. Note on the Appendix F positioning check sheet any deviations necessary to position the Part 572, Subpart E dummy.) Complete the Appendix F check sheets, but include them in the test report ONLY if there is a test failure.		
X	4.	Position the adjustable seat belt anchorage in the manufacturer's nominal design position for a 50 <sup>th</sup> percentile adult male occupant.		
X	5.	Attach the inboard reach string to the base of the head following the instructions on Figure 3.		
X	6.	Attach the outboard reach string to the torso sheath following the instructions on Figure 3.		
X	7.	Place the latch plate in the stowed position.		
X	8.	Extend inboard reach string in front of the dummy and then backward and outboard to the latch plate to generate an arc of the reach envelope of the test dummy's arms. Is the latch plate within the reach envelope?		
Х	9.	X Yes - Pass No Extend outboard reach string in front of the dummy and then backward and outboard to the latch plate to generate arcs of the reach envelope of the test dummy's arms. Is the latch plate within the reach envelope?		
		X Yes - Pass No		
X	10.	Is the latch plate within the inboard (item 10) or outboard (item 11) reach envelope?		
		Yes - Pass		
X	11.	No - Fail Using the clearance test block, specified in Figure 4, is there sufficient clearance between the vehicle seat and the side of vehicle interior to allow the test block to move unhindered to the latch plate or buckle?		
		X Yes - Pass No - Fail		

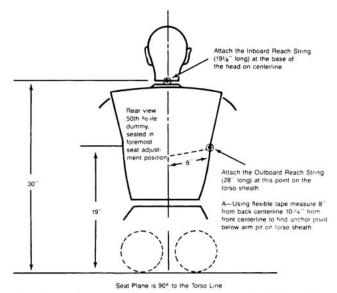


Figure 3. Location of Anchoring Points for Latchplate Reach Limiting Chains or Strings to Test for Latchplate Accessibility Using Subpart E Test Device

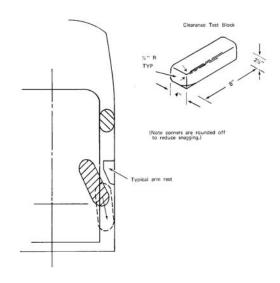


Figure 4—USE OF CLEARANCE TEST BLOCK TO DETERMINE HAND/ARM ACCESS

I certify that I have read and performed each instruction.

Signature: Wayne Sahll

# LATCH PLATE ACCESS (S7.4.4)

Test Vehicle: 2008 Toyota Scion XB NHTSA No.: C85100
Test Program: FMVSS 208 Compliance Test Date: 5/15/08

Test Technician: Wayne Dahlke

Test all front outboard seat belts **other than those in** walk-in van-type vehicles and those at front outboard designated seating positions in **passenger cars**. Complete a form for each applicable seat belt.

аррпо	40.0 000			
DESIGNATED SEATING POSITION: Right Front Passenger				
X	1.	Put the seat in the forwardmost fore-aft and full down height position determined in Data Sheet 14.2. (S10.7)		
X	2. 3.	Put the seat back angle in the position determined in Data Sheet 14.2.  Position the test dummy using the procedures in Appendix F. (Some modifications to the		
	4	positioning procedure may need to be made because the seat is in its forward most position. Note on the Appendix F positioning check sheet any deviations necessary to position the Part 572, Subpart E dummy.) Complete the Appendix F check sheets, but include them in the test report ONLY if there is a test failure.		
X	4.	Position the adjustable seat belt anchorage in the manufacturer's nominal design position for a 50 <sup>th</sup> percentile adult male occupant.		
X	5.	Attach the inboard reach string to the base of the head following the instructions on Figure 3.		
X	6.	Attach the outboard reach string to the torso sheath following the instructions on Figure 3.		
X	7.	Place the latch plate in the stowed position.		
X	8.	Extend inboard reach string in front of the dummy and then backward and outboard to the latch plate to generate an arc of the reach envelope of the test dummy's arms. Is the latch plate within the reach envelope?		
		X Yes - Pass No		
X	9.	Extend outboard reach string in front of the dummy and then backward and outboard to the latch plate to generate arcs of the reach envelope of the test dummy's arms. Is the latch plate within the reach envelope?		
		X Yes - Pass No		
X	10.	Is the latch plate within the inboard (item 10) or outboard (item 11) reach envelope?  X Yes - Pass		
		No - Fail		
X	11.	Using the clearance test block, specified in Figure 4, is there sufficient clearance between the vehicle seat and the side of vehicle interior to allow the test block to move unhindered to the latch plate or buckle?		
		X Yes - Pass No - Fail		

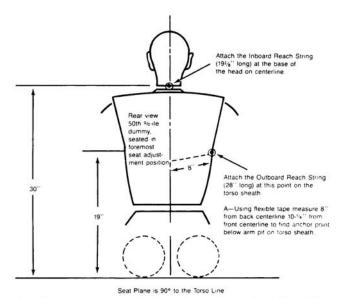


Figure 3. Location of Anchoring Points for Latchplate Reach Limiting Chains or Strings to Test for Latchplate Accessibility Using Subpart E Test Device

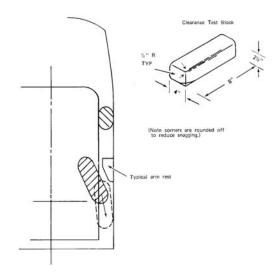


Figure 4—USE OF CLEARANCE TEST BLOCK TO DETERMINE HAND/ARM ACCESS

I certify that I have read and performed each instruction.

Signature: Wayne Tahlk

# **SEAT BELT RETRACTION (S7.4.5)**

Test Vehicle:2008 Toyota Scion XBNHTSA No.:C85100Test Program:FMVSS 208 ComplianceTest Date:5/15/08

Test Technician: Wayne Dahlke

Test all front outboard seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESI	DESIGNATED SEATING POSITION: Left Front Driver				
X	1.	Is the vehicle a passenger car or walk-in van-type vehicle?			
		Yes, this form is complete			
		X No			
X	2.	Put the seat in the mid fore-aft and full down height position determined in Data Sheet 14.2. (S8.1.2)			
X	3.	Put the seat back angle in the position determined in Data Sheet 14.2. (8.1.3)			
X	4.	Position the Part 572 Subpart E test dummy according to dummy position placement instructions in Appendix F. Complete the Appendix F check sheets, but include them in the test report ONLY if there is a test failure.			
X	5.	Fasten the seat belt around the dummy.			
X	6.	Remove all slack from the lap belt portion. (S10.9)			
		N/A, the seat does not have a fore-aft adjustment			
X	7.	Pull the upper torso webbing out of the retractor and allow it to retract; repeat this four times. (S10.9)			
X	8.	Apply a 2 to 4 pound tension load to the lap belt. (S10.9)			
X		Pound load applied: <u>3</u>			
X	9.	Is the belt system equipped with a tension relieving device?			
		Yes, continue			
		No, go to 12			
	10.	Introduce the maximum amount of slack into the upper torso belt that is recommended by the vehicle manufacturer in the vehicle owner's manual. (S10.9).			
	11.	Check the statement that applies to this test vehicle:			
	11.1	The torso and lap belt webbing of the seat belt system automatically retracts to a stowed position when the adjacent vehicle door is in an open position and the seat belt latch plate is released.			
		Yes - Pass go to 12			
		No - go to 11.2			
	11.2	The torso and lap belt webbing of the seat belt system automatically retracts when the seat belt latch plate is released.			
		Yes - Pass go to 12			
		No - go to 11.3			
	11.3	Neither 11.1 nor 11.2 apply.			
		Fail			

V	10	١٨/;	th the webbing and hardware in the atowed position are the webbing and hardware
X	12.		th the webbing and hardware in the stowed position are the webbing and hardware evented from being pinched when the door is closed?
		X	Yes - Pass
			No - Fail
X	13.	ter	his test vehicle has an open body (without doors) and has a belt system with a nsion-relieving device, does the belt system fully retract when the tension-relieving vice is deactivated?
		Х	N/A - Not an open body vehicle
			Yes - Pass
			No - Fail
REMA	ARKS:		
I certif	fy that I	ha	ve read and performed each instruction.

Signature: Wayne gahlle

5/15/08

Date:

## **SEAT BELT RETRACTION (S7.4.5)**

Test Vehicle:2008 Toyota Scion XBNHTSA No.:C85100Test Program:FMVSS 208 ComplianceTest Date:5/15/08

Test Technician: Wayne Dahlke

Test all front outboard seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESI	DESIGNATED SEATING POSITION: Right Front Passenger				
X	1.	Is the vehicle a passenger car or walk-in van-type vehicle?			
		Yes, this form is complete			
		X No			
X	2.	Put the seat in the mid fore-aft and full down height position determined in Data Sheet 14.2. (S8.1.2)			
X	3.	Put the seat back angle in the position determined in Data Sheet 14.2. (8.1.3)			
X	4.	Position the Part 572 Subpart E test dummy according to dummy position placement instructions in Appendix F. Complete the Appendix F check sheets, but include them in the test report ONLY if there is a test failure.			
X	5.	Fasten the seat belt around the dummy.			
X	6.	Remove all slack from the lap belt portion. (S10.9)			
		N/A, the seat does not have a fore-aft adjustment			
X	7.	Pull the upper torso webbing out of the retractor and allow it to retract; repeat this four times. (S10.9)			
X	8.	Apply a 2 to 4 pound tension load to the lap belt. (S10.9)			
X		Pound load applied: <u>3</u>			
X	9.	Is the belt system equipped with a tension relieving device?			
		Yes, continue			
		XNo, go to 12			
	10.	Introduce the maximum amount of slack into the upper torso belt that is recommended by the vehicle manufacturer in the vehicle owner's manual. (S10.9).			
	11.	Check the statement that applies to this test vehicle:			
	11.1	The torso and lap belt webbing of the seat belt system automatically retracts to a stowed position when the adjacent vehicle door is in an open position and the seat belt latch plate is released.			
		Yes - Pass go to 12			
		No - go to 11.2			
	11.2	The torso and lap belt webbing of the seat belt system automatically retracts when the seat belt latch plate is released.			
		Yes - Pass go to 12			
		No - go to 11.3			
	11.3	Neither 11.1 nor 11.2 apply.			
		Fail			

X	12.	With the webbing and hardware in the stowed position are the webbing and hardware prevented from being pinched when the door is closed?
		X Yes - Pass
		No - Fail
X	13.	If this test vehicle has an open body (without doors) and has a belt system with a tension-relieving device, does the belt system fully retract when the tension-relieving device is deactivated?
		X N/A - Not an open body vehicle
		Yes - Pass
		No - Fail
REMA	ARKS:	
I certif	fy that I	I have read and performed each instruction.
Signa	ture:	Wayne Tahle

Date:

5/15/08

## **SEAT BELT GUIDES AND HARDWARE (\$7.4.6)**

Test Vehicle: 2008 Toyota Scion XB NHTSA No.: C85100
Test Program: FMVSS 208 Compliance Test Date: 5/15/08

Test Technician: Wayne Dahlke

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIG	DESIGNATED SEATING POSITION: Left Front Driver		
X	1.	Is the seat cushion movable so that the seat back serves a function other than seating? (S7.4.6.1 (b))	
		Yes, this form is complete	
		X No, go to 2	
X	2.	Is the seat removable? (S7.4.6.1(b))	
		Yes, this form is complete	
		X No, go to 3	
X	3.	Is the seat movable so that the space formerly occupied by the seat can be used for a secondary function? (S7.4.6.1(b))	
		Yes, this form is complete	
		X No, go to 4	
X	4.	Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back? (S7.4.6.1(a))	
		Yes, go to 5	
		X No, this form is complete	
	5.	Does one of the following three parts, the seat belt latch plate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)? (S7.4.6.1(a))	
		Yes - Pass	
		No - Fail	
		Identify the part(s) on top or above the seat.	
		Seat belt latch plate	
		Buckle	
		Seat belt webbing	
	6.	Are the remaining two seat belt parts accessible under normal conditions?	
		Yes - Pass	
		No - Fail	
	7.	The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the belt is completely retracted or, if the belt is nonretractable, the belt is unlatched. (S7.4.6.2)	
		Yes - Pass	
		No - Fail	

8.	The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat is moved to any position to which it is designed to be adjusted. (S7.4.6.2)  Yes - Pass  No - Fail
9.	The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat back, if foldable, is folded forward as far as possible and then moved backward into position. (S7.4.6.2)
	Yes - Pass
10.	No - Fail  Is the inboard receptacle end of the seat belt assembly, installed in the front outboard designated seating position, accessible with the center armrest in any position to which it can be adjusted (without moving the armrest)? (S7.4.6.2)
	Yes - Pass No - Fail N/A - Rear seat
REMARKS:	
I certify that	I have read and performed each instruction.
Signature:	Warper Dahle
Date:	5/15/08

## **SEAT BELT GUIDES AND HARDWARE (\$7.4.6)**

Test Vehicle: 2008 Toyota Scion XB NHTSA No.: C85100
Test Program: FMVSS 208 Compliance Test Date: 5/15/08

Test Technician: Wayne Dahlke

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIGNATED SEATING POSITION: Right Front Passenger				
X	1.	Is the seat cushion movable so that the seat back serves a function other than seating? (S7.4.6.1 (b))		
		Yes, this form is complete		
		X No, go to 2		
X	2.	Is the seat removable? (S7.4.6.1(b))		
		Yes, this form is complete		
	_	X No, go to 3		
X	3.	Is the seat movable so that the space formerly occupied by the seat can be used for a secondary function? (S7.4.6.1(b))		
		Yes, this form is complete		
		X No, go to 4		
X	4.	Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back? (S7.4.6.1(a))		
		Yes, go to 5		
		X No, this form is complete		
	5.	Does one of the following three parts, the seat belt latch plate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)? (S7.4.6.1(a))		
		Yes - Pass		
		No - Fail		
		Identify the part(s) on top or above the seat.		
		Seat belt latch plate		
		Buckle		
		Seat belt webbing		
	6.	Are the remaining two seat belt parts accessible under normal conditions?		
<u> </u>		Yes - Pass		
		No - Fail		
	7.	The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the belt is completely retracted or, if the belt is nonretractable, the belt is unlatched. (S7.4.6.2)		
		Yes - Pass		
		No - Fail		

The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat is moved to any position to which it is designed to be adjusted. (S7.4.6.2)  Yes - Pass  No - Fail
The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat back, if foldable, is folded forward as far as possible and then moved backward into position. (S7.4.6.2)
Yes - Pass
No - Fail  Is the inboard receptacle end of the seat belt assembly, installed in the front outboard designated seating position, accessible with the center armrest in any position to which it can be adjusted (without moving the armrest)? (S7.4.6.2)
Yes - Pass
No - Fail N/A - Rear seat
I have read and performed each instruction.
Warpe Dahll
5/15/08

# **SEAT BELT GUIDES AND HARDWARE (\$7.4.6)**

Test Vehicle: 2008 Toyota Scion XB NHTSA No.: C85100
Test Program: FMVSS 208 Compliance Test Date: 5/15/08

Test Technician: Wayne Dahlke

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIC	DESIGNATED SEATING POSITION: Left Rear Passenger				
X	1.	Is the seat cushion movable so that the seat back serves a function other than seating? (S7.4.6.1 (b))			
		Yes, this form is complete			
		X No, go to 2			
X	2.	Is the seat removable? (S7.4.6.1(b))			
		Yes, this form is complete			
	_	X No, go to 3			
X	3.	Is the seat movable so that the space formerly occupied by the seat can be used for a secondary function? (S7.4.6.1(b))			
		Yes, this form is complete			
		No, go to 4			
	4.	Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back? (S7.4.6.1(a))			
		Yes, go to 5			
		No, this form is complete			
	5.	Does one of the following three parts, the seat belt latch plate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)? (S7.4.6.1(a))			
		Yes - Pass			
		No - Fail			
		Identify the part(s) on top or above the seat.			
		Seat belt latch plate			
		Buckle			
		Seat belt webbing			
	6.	Are the remaining two seat belt parts accessible under normal conditions?			
		Yes - Pass			
		No - Fail			
	7.	The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the belt is completely retracted or, if the belt is nonretractable, the belt is unlatched. (S7.4.6.2)			
		Yes - Pass			
		No - Fail			

	8.	The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat is moved to any position to which it is designed to be adjusted. (S7.4.6.2)  Yes - Pass  No - Fail
	9.	The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat back, if foldable, is folded forward as far as possible and then moved backward into position. (S7.4.6.2)
	10.	Yes - Pass No - Fail Is the inboard receptacle end of the seat belt assembly, installed in the front outboard designated seating position, accessible with the center armrest in any position to which it can be adjusted (without moving the armrest)? (S7.4.6.2)
		Yes - Pass No - Fail N/A - Rear seat
REMA	ARKS:	
I certi	fy that	I have read and performed each instruction.
Signa	ture:	Warpe Tahle
Date:		5/15/08

# **SEAT BELT GUIDES AND HARDWARE (S7.4.6)**

Test Vehicle:  $\underline{2008 \text{ Toyota Scion XB}}$  NHTSA No.:  $\underline{C85100}$  Test Program:  $\underline{FMVSS 208 \text{ Compliance}}$  Test Date:  $\underline{5/15/08}$ 

Test Technician: Wayne Dahlke

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIG	SNATE	D SEATING POSITION: Center Rear Passenger
X	1.	Is the seat cushion movable so that the seat back serves a function other than seating? (S7.4.6.1 (b))
		Yes, this form is complete
		X No, go to 2
X	2.	Is the seat removable? (S7.4.6.1(b))
		Yes, this form is complete
		X No, go to 3
X	3.	Is the seat movable so that the space formerly occupied by the seat can be used for a secondary function? (S7.4.6.1(b))
		X Yes, this form is complete
		No, go to 4
	4.	Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back? (S7.4.6.1(a))
		Yes, go to 5
		No, this form is complete
	5.	Does one of the following three parts, the seat belt latch plate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)? (S7.4.6.1(a))  Yes - Pass
		No - Fail
		Identify the part(s) on top or above the seat.
		Seat belt latch plate
		Buckle Soot helt webbing
	6.	Seat belt webbing  Are the remaining two seat belt parts accessible under normal conditions?
	0.	Yes - Pass
		No - Fail
	7.	The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the belt is completely retracted or, if the belt is nonretractable, the belt is unlatched. (S7.4.6.2)
		Yes - Pass
		No - Fail

	8.	The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat is moved to any position to which it is designed to be adjusted. (S7.4.6.2)  Yes - Pass
		No - Fail
	9.	The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat back, if foldable, is folded forward as far as possible and then moved backward into position. (S7.4.6.2)
		Yes - Pass
		No - Fail
	10.	Is the inboard receptacle end of the seat belt assembly, installed in the front outboard designated seating position, accessible with the center armrest in any position to which it can be adjusted (without moving the armrest)? (S7.4.6.2)
		Yes - Pass
		No - Fail
		N/A - Rear seat
REMA	ARKS:	
I certi	fy that	I have read and performed each instruction.
Signa	ture:	wayne Table
Date:		<u>5/15/08</u>

# **SEAT BELT GUIDES AND HARDWARE (\$7.4.6)**

Test Vehicle: 2008 Toyota Scion XB NHTSA No.: C85100
Test Program: FMVSS 208 Compliance Test Date: 5/15/08

Test Technician: Wayne Dahlke

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DECIONATED OF ATING DOCITION DIVING D						
DESIGNATED SEATING POSITION: Right Rear Passenger						
X	1.	Is the seat cushion movable so that the seat back serves a function other than seating? (S7.4.6.1 (b))				
		Yes, this form is complete				
		X No, go to 2				
X	2.	Is the seat removable? (S7.4.6.1(b))				
		Yes, this form is complete				
		X No, go to 3				
X	3.	Is the seat movable so that the space formerly occupied by the seat can be used for a secondary function? (S7.4.6.1(b))				
		X Yes, this form is complete				
		No, go to 4				
	4.	Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back? (S7.4.6.1(a))				
		Yes, go to 5				
		No, this form is complete				
	5.	Does one of the following three parts, the seat belt latch plate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)? (S7.4.6.1(a))  Yes - Pass				
		No - Fail				
	Identify the part(s) on top or above the seat.					
		Seat belt latch plate				
		Buckle				
		Seat belt webbing				
	6.	Are the remaining two seat belt parts accessible under normal conditions?				
		Yes - Pass				
		No - Fail				
	7.	The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the belt is completely retracted or, if the belt is nonretractable, the belt is unlatched. (S7.4.6.2)				
		Yes - Pass				
		No - Fail				

8.	The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat is moved to any position to which it is designed to be adjusted. (S7.4.6.2)  Yes - Pass No - Fail
9.	The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat back, if foldable, is folded forward as far as possible and then moved backward into position. (S7.4.6.2)
	Yes - Pass
	No - Fail
10.	Is the inboard receptacle end of the seat belt assembly, installed in the front outboard designated seating position, accessible with the center armrest in any position to which it can be adjusted (without moving the armrest)? (S7.4.6.2)
	Yes - Pass
	No - Fail
	N/A - Rear seat
REMARKS	S:
_	
I certify that	at I have read and performed each instruction.
Signature:	Wayne Tahle
Date:	5/15/08

## MARKING OF REFERENCE POINTS FOR VARIOUS TEST POSITIONS AND POINTS

Test Vehicle: 2008 Toyota Scion XB NHTSA No.: C85100
Test Program: FMVSS 208 Compliance Test Date: 7/1/08

Test Technician: <u>Tim Bratz</u>

DATA SHEET 14.1

MARKING OF REFERENCE POINTS FOR 5<sup>th</sup> FEMALE

X Driver Seat \_\_Passenger Seat

- 1. Seat Position
- X 1.1 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest, retracted or deflated adjustment positions. (S16.2.10.1, S20.1.9.1, S20.4.1, S22.1.7.1)

X N/A - No lumbar adjustment

- X 1.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2, S20.1.9.2, S20.4.1, S22.1.7.1, S22.4.2.1, S22.4.3.1, S24.4.2.1, S26.2.3, S26.3.1)
  X N/A No additional support adjustment
- X 1.3 Position an adjustable leg support system in its rearmost position. (8/27/04 interpretation to Toyota)

X N/A - No adjustable leg support system

- X 1.4 **Mark** a point (seat cushion reference point) on the side of the seat cushion that is between 150 mm and 250 mm from the front edge of the seat cushion. (S16.3.1.12)
- $\underline{X}$  1.5 Draw a line (seat cushion reference line) through the seat cushion reference point. (S16.3.1.13)
- X 1.6 Use only the controls that primarily move the seat in the fore-aft direction to move the seat cushion reference point to the rearmost position. (S16.2.10.3.1, S22.1.7.3)
- X 1.7 If the seat cushion adjusts fore-aft, independent of the seat back, use only the controls that primarily move the seat cushion in the fore-aft direction to move the seat cushion reference point to the rearmost position. (S16.2.10.3.1, S20..1.9.3)
  X N/A No independent fore-aft seat cushion adjustment
- X 1.8 Use any part of any control, other than the parts just used for fore-aft positioning, to determine the range of angles of the seat cushion reference line and to set the seat cushion reference line at the mid-angle. (S16.2.10.3.1)

Maximum angle 6.0°

Minimum angle 0.0°

Mid-angle 3.0°

X 1.9 If the seat and/or seat cushion height is adjustable, use any part of any control other than the parts which primarily move the seat or seat cushion fore-aft, to put the seat cushion reference point in its lowest position with the seat cushion reference line angle at the mid-angle found in 1.8. (S16.2.10.3.1)

N/A - No seat height adjustment

X 1.10 Use only the controls that primarily move the seat in the fore-aft direction to verify the seat is in the rearmost position.

- X 1.11 Use only the controls that primarily move the seat in the fore-aft direction to mark for future reference the fore-aft seat positions. Mark each position so that there is a visual indication when the seat is at a particular position. For manual seats, move the seat forward one detent at a time and mark each detent. For power seats, mark only the rearmost, middle, and foremost positions. Label three of the positions with the following: F for foremost, M for mid-position (if there is no mid-position, label the closest adjustment position to the rear of the mid-point), and R for rearmost.
- <u>X</u> 1.12 Use only the controls that primarily move the seat in the fore-aft direction to place the seat in the rearmost position.
- X 1.13 Use any part of any control, other than the parts which primarily move the seat or seat cushion fore-aft, to find and visually mark for future reference the maximum, minimum, and middle height of the seat cushion reference point with the seat cushion reference line at the mid-angle determined in 1.8. (S20.1.9.4, S22.1.2, S22.1.7.4, S22.3.1, S22.4.3.1, S24.3.1, S24.4.3.1, S26.2.3, S26.3.1)
   N/A No seat height adjustment. Go to 1.18
- X 1.14 Use only the controls that primarily move the seat and/or seat cushion in the fore-aft direction to place the seat in the mid-fore-aft position.
- X 1.15 Use any part of any control, other than the parts which primarily move the seat or seat cushion fore-aft, to find and visually **mark** for future reference the maximum, minimum, and middle height of the seat cushion reference point with the seat cushion reference line at the mid-angle determined in 1.8. (S20.1.9.4, S22.1.2, S22.1.7.4, S22.3.1, S24.1.2, S24.3.1)
- $\underline{X}$  1.16 Use only the control that change the seat in the fore-aft direction to place the seat in the foremost position. (S16.2.10.3.2)
- X 1.17 Use any part of any control, other than the parts which primarily move the seat or seat cushion fore-aft, to find and visually **mark** for future reference the maximum, minimum, and middle height of the seat cushion reference point with the seat cushion reference line at the mid-angle determined in 1.8. (S16.2.10.3.3, S20.1.9.4, S22.1.2, S22.1.7.4, S22.3.1, S24.1.2, S24.3.1)
- X 1.18. Visually **mark** for future reference the seat back angle at the manufacturer's nominal design riding position for a **50th percentile adult male** in the manner specified by the manufacturer for the rearmost, mid, and foremost seat positions. (S20.1.9.5, S22.1.7.5, S22.4.2.1, S22.4.3.1, S24.1.2, S24.4.2.1, S26.2.3, S26.3.1)
  - N/A No seat back angle adjustment

Manufacturer's design seat back angle

5th notch (88° on Headrest Bar Line)

X 1.19. Is the seat a bucket seat?

X Yes, go to 1.20 and skip 1.21

\_No, go to 1.21 and skip 1.20

X 1.20 Bucket seats:

Locate and **mark** for future reference the longitudinal centerline of the seat cushion. The intersection of the vertical longitudinal plane that passes through the SgRP and the seat cushion upper surface determines the longitudinal centerline of a bucket seat cushion. (S16.3.1.10 & S20.1.10)

\_\_1.21 Bench seats (complete ONLY the one that is applicable to the seat being marked):

1.21.1 Driver Seat

Locate and **mark** for future reference the longitudinal line on the seat cushion that marks the intersection of the vertical longitudinal plane through the centerline of the steering wheel and the seat cushion upper surface.

1.21	1.2 Passenger Seat  Locate and <b>mark</b> for future reference the longitudinal centerline of th cushion. The longitudinal centerline is the same distance from the longitude of the vehicle as the center of the steering wheel. (S20.2.1.3, S22.2. S20.4.4, S22.2.2.1(b), S22.2.2.3(b), S22.2.2.4(a), S22.2.2.5(a), S22.2.2.7(a), S24.2.3(a))	ongitudinal centerline 1.3, S24.2.3,		
	Record the distance from the longitudinal centerline of the vehicle to steering wheel.	the center of the		
	Record the distance from the longitudinal centerline of the vehicle to centerline of the seat cushion. (The vertical plane through this longit Plane B for suppression.)			
2.	Head Restraint Position N/A Vehicle contains automatic head restraints.  N/A, there is no head restraint adjustment			
<u>X</u> 2.1		6 S20.4.1,		
<u>X</u> 2.2				
<u>X</u> 2.3	Measure the vertical distance from the top most point of the head resmost point. Locate and <b>mark</b> a horizontal plane through the midpoin (S16.3.4.3)			
	Vertical height of head restraint <u>220</u> mm Mid-point height <u>110</u> mm			
	Lin Bhat	7/1/08		
I certify	fy that I have read and performed each instruction.	ate		

#### DATA SHEET 14.1

# MARKING OF REFERENCE POINTS FOR 5th FEMALE

\_\_Driver Seat X Passenger Seat

### 1. Seat Position

- X 1.1 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest, retracted or deflated adjustment positions. (S16.2.10.1, S20.1.9.1, S20.4.1, S22.1.7.1)
  - X N/A No lumbar adjustment
- X 1.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2, S20.1.9.2, S20.4.1, S22.1.7.1, S22.4.2.1, S22.4.2.1, S24.4.2.1, S26.2.3, S26.3.1)
   X N/A No additional support adjustment
- X 1.3 Position an adjustable leg support system in its rearmost position. (8/27/04 interpretation to Toyota)
   X N/A No adjustable leg support system
- X 1.4 **Mark** a point (seat cushion reference point) on the side of the seat cushion that is between 150 mm and 250 mm from the front edge of the seat cushion. (S16.3.1.12)
- $\underline{X}$  1.5 Draw a line (seat cushion reference line) through the seat cushion reference point. (S16.3.1.13)
- $\underline{X}$  1.6 Use only the controls that primarily move the seat in the fore-aft direction to move the seat cushion reference point to the rearmost position. (S16.2.10.3.1, S22.1.7.3)
- X 1.7 If the seat cushion adjusts fore-aft, independent of the seat back, use only the controls that primarily move the seat cushion in the fore-aft direction to move the seat cushion reference point to the rearmost position. (S16.2.10.3.1, S20..1.9.3) X N/A No independent fore-aft seat cushion adjustment
- X 1.8 Use any part of any control, other than the parts just used for fore-aft positioning, to determine the range of angles of the seat cushion reference line and to set the seat cushion reference line at the mid-angle. (S16.2.10.3.1)

Maximum angle <u>Zero</u> Minimum angle <u>Zero</u> Mid-angle Zero

- X 1.9 If the seat and/or seat cushion height is adjustable, use any part of any control other than the parts which primarily move the seat or seat cushion fore-aft, to put the seat cushion reference point in its lowest position with the seat cushion reference line angle at the mid-angle found in 1.8. (S16.2.10.3.1)
  - X N/A No seat height adjustment
- <u>X</u> 1.10 Use only the controls that primarily move the seat in the fore-aft direction to verify the seat is in the rearmost position.
- X 1.11 Use only the controls that primarily move the seat in the fore-aft direction to **mark** for future reference the fore-aft seat positions. **Mark** each position so that there is a visual indication when the seat is at a particular position. For manual seats, move the seat forward one detent at a time and **mark** each detent. For power seats, **mark** only the rearmost, middle, and foremost positions. Label three of the positions with the following: F for foremost, M for mid-position (if there is no mid-position, label the closest adjustment position to the rear of the mid-point), and R for rearmost.
- <u>X</u> 1.12 Use only the controls that primarily move the seat in the fore-aft direction to place the seat in the rearmost position.

- 2. Head Restraint Position
  - \_\_N/A Vehicle contains automatic head restraints.
    - N/A, there is no head restraint adjustment
- <u>X</u> 2.1 Adjust the head restraint to its lowest position. (S16.2.10.2, S20.1.9.6 S20.4.1, S22.1.7.6, S22.4.2.1, S22.4.3.1, S24.4.3.1, S26.2.3, S26.3.1)
- X 2.2 All adjustments of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible. **Mark** the foremost position. (S16.2.10.2 & S16.3.4.4 & S20.1.9.6, S20.4.1, S22.4.2.1, S22.4.3.1, S24.4.3.1, S26.2.3, S26.3.1)
- X 2.3 Measure the vertical distance from the top most point of the head restraint to the bottom most point. Locate and **mark** a horizontal plane through the midpoint of this distance. (S16.3.4.3)

Vertical height of head restraint <u>220 mm</u> Mid-point height <u>110 mm</u>

Lim Brat	7/1/08
I certify that I have read and performed each instruction.	Date

# DATA SHEET 14.3

# MARKING OF REFERENCE POINTS FOR STEERING WHEEL

<u>X</u> 1.	Is the steering wheel adjustable up and down and/or in and out?  XYes - go to 2  No - this form is complete			
<u>X</u> 2.	Find and <b>mark</b> for future reference each up and down position. Label three of the positions with the following: H for highest, M for mid-position (if there is no mid-position, label the next lowest adjustment position), and L for lowest. N/A - steering wheel is not adjustable up and down			
<u>X</u> 3.	3. Find and mark for future references each in and out position. Label three of the positions with the following: F for foremost, M for mid-position (if there is no mid-position label the next rearmost adjustment position), and R for rearmost. X_N/A - steering wheel is not adjustable in and out.			
	Lim Bran	<u>7/1/08</u>		
I certi	fy that I have read and performed each instruction.	Date		

# DATA SHEET 14.4

# MARKING OF REFERENCE POINTS FOR DRIVER LOW RISK DEPLOYMENT

<u>X</u> 1.	$\underline{X}$ Position 1 $\underline{X}$ Position 2 Position the steering wheel so the front wheels are in the s	straight-ahead position.		
<u>X</u> 2.	(S26.2.1) Position any adjustable parts of the steering controls to the			
<u>/(</u> 2.	in Data Sheet 14.3 above. If a mid-position adjustment is			
<u>X</u> 3.	controls to the next lowest detent position. (S26.2.1) Locate and <b>mark</b> the point that is defined by the intersection and a line between the volumetric center of the smallest volumed folded undeployed air bag and the volumetric center of the The vertical plane parallel to the vehicle longitudinal center referred to as "Plane E." (Check determination method be Measurements with respect to measurement reference points).	plume that can encompass the static fully inflated air bag. rline through this point is low.) (S26.2.2)		
	The longitudinal centerline of the air bag was used.			
<u>X</u> 4.	Point determined using manufacturer's information supplied by the COTR .  (Include manufacturer's information in the test report.)  OR  X Point determined by test lab personnel and approved by the COTR.  (Include supporting documentation in the test report.)  Locate the highest point of the air bag module cover. The horizontal plane through this point is referred to as "Plane F." (Check determination method below.) (S26.2.6)  Measurements with respect to measurement reference points:			
	The top of the air bag module cover was used.			
	Point determined using manufacturer's information support (Include manufacturer's information in the test report.)  OR  X Point determined by test lab personnel and approved by (Include manufacturer's information in the test report.)	•		
	Warpe Dahll	6/9/08		
I certi	fy that I have read and performed each instruction.	Date		

# AIR BAG SUPPRESSION TELLTALE (S19.2.2)

Test Vehicle:		2008 Toyota Scion XB	NHTSA No.:	<u>C85100</u>		
		FMVSS 208 Compliance	Test Date:	<u>5/9/08</u>		
Test I	echnician:	<u>Jeff Lewandowski</u>				
<u>X</u> 1.	1. Is the vehicle certified to any suppression performance standards of FMVSS 208?					
	X Yes - go t	* * * * * * * * * * * * * * * * * * * *				
	No - this form is complete					
<u>X</u> 2.		e emit yellow light when the air bag is supp	pressed? (S19.2.2(a	a))		
		ssNO - FAIL				
<u>X</u> 3.	Are the wor	rds "PASSENGER AIR BAG OFF" or "PAS	SS AIR BAG OFF" (	S19.2.2(b))		
<u>X</u> 3.1	on the tellta	ale? (S19.2.2(b))				
	X Yes - Pas	ss, go to 4				
	No - go to					
3.2		nm of the telltale? (S19.2.2(b)) <u>3</u> mm from	the edge of the tellt	ale light		
		ssNO - FAIL				
<u>X</u> 4.		le separate from the air bag readiness indi	cator? (S19.2.2(c))			
		ssNO - FAIL				
<u>X</u> 5.		le within the interior of the vehicle? (S19.2.	.2(d))			
		ssNO - FAIL				
<u>X</u> 6		le forward of and above the design H-point				
	outboard passenger's seat when the seats are in their forwardmost seating positions?					
	(S19.2.2(d)	•				
V 7		ssNO - FAIL				
<u>X</u> 7.		le away from surfaces that can be used for				
		hat could obscure the telltale from either the	ie driver's or front o	utboard		
		s view? (S19.2.2(d))				
V Q		ssNO - FAIL le located so that it is not obscured from the	a drivar or front out	hoard		
<u>X</u> 8.		by a rear-facing child restraint in Appendix				
		seat? (S19.2.2(d))	A ilistalieu ili tile il	oni outboard		
		seat: (019.2.2(d))				
<u>X</u> 9.		le visible or recognizable during the night?	(S19.2.2(e))			
<u>//</u> 0.		ss NO - FAIL	(010.2.2(0))			
<u>X</u> 10.		le visible or recognizable during the day? (	S19 2 2(e))			
		ss NO - FAIL	(-,,,			
<u>X</u> 11.		visibility adjustment, do all the adjustment	levels make the tel	Itale visible and		
		le? (S19.2.2(g))				
	X_N/A-No visibility adjustment					
		assNO - FAIL				
<u>X</u> 12.	Does the te	elltale remain illuminated while the air bag i	s suppressed? (S19	9.2.2(h)) (Leave		
		suppressed for 5 minutes.)				
	XYes - PassNO - FAIL					
<u>X</u> 13.	Is the telltal	le off while the air bag is activated? (S19.2	.2(h)) (Leave the ai	r bag activated		
	for 5 minutes.)					
	X Yes - Pas	ssNO - FAIL				
	. —	-101 0 6-				
		Eff Ceraulougho		<u>5/9/08</u>		
	I certify that	t I have read and performed each instruction	on	Date		

Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R)
Section B Rear Facing CRS

NHTSA NO.:	C85100	TEST DATE:	5/9/08
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	062

CHILD RESTRAINT NAME:	Britax
CHILD RESTRAINT MODEL:	Handle With Care 191
DATE OF MANUFACTURE:	5-26-2000

Base: On Off  $\underline{X}$  N/A-Restraint does not have a removable base

Manufacturer's design seat back angle:

Tested seat back angle:

Manufacturer's specified anchorage position:

Tested anchorage position:

6th notch
6th notch
Top/Highest
Top/Highest

A blanket and visor were not used in the suppression testing because they did not affect the weight sensing system used on the vehicle.

**Test Summary** 

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward 4 *	130	Suppressed
Rear	Middle	130	Suppressed
Facing	Rearward	128	Suppressed
Unbelted	Forward 5 *	N/A	Suppressed
Rear	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed
Unbelted	Forward 6 *	N/A	Suppressed
Forward	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed

Successful Unbelted 5<sup>th</sup> percentile Female Dummy Reactivation was performed with the seat in the Rearward position. (SN506)

<sup>\*</sup> The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft position with respect to the foremost position. (1 = Full Forward; 17 = Full Rearward; 17 notches total Seat Slide travel)

Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R)
Section B Rear Facing CRS

NHTSA NO.:	C85100	TEST DATE:	5/9/08
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	062

CHILD RESTRAINT NAME:	Evenflo
CHILD RESTRAINT MODEL:	First Choice 204
DATE OF MANUFACTURE:	6-20-2000

Base: On Off  $\underline{X}$  N/A-Restraint does not have a removable base

Manufacturer's design seat back angle:

Tested seat back angle:

Manufacturer's specified anchorage position:

Tested anchorage position:

6th notch
6th notch
Top/Highest
Top/Highest

A blanket and visor were not used in the suppression testing because they did not affect the weight sensing system used on the vehicle.

**Test Summary** 

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward 5 *	131	Suppressed
Rear	Middle	127	Suppressed
Facing	Rearward	127	Suppressed
Unbelted	Forward 8 *	N/A	Suppressed
Rear	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed
Unbelted	Forward 8 *	N/A	Suppressed
Forward	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed

Successful Unbelted 5<sup>th</sup> percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN506)

<sup>\*</sup> The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft position with respect to the foremost position. (1 = Full Forward; 17 = Full Rearward; 17 notches total Seat Slide travel)

Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R)
Section B Rear Facing CRS

NHTSA NO.:	C85100	TEST DATE:	5/9/08
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	062

CHILD RESTRAINT NAME:	Graco
CHILD RESTRAINT MODEL:	Infant 8457
DATE OF MANUFACTURE:	8-31-2000

Base: X On Off N/A-Restraint does not have a removable base

Manufacturer's design seat back angle:

Tested seat back angle:

Manufacturer's specified anchorage position:

Tested anchorage position:

6th notch
6th notch
Top/Highest
Top/Highest

A blanket and visor were not used in the suppression testing because they did not affect the weight sensing system used on the vehicle.

**Test Summary** 

100t Gammar y			
Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward 6 *	127	Suppressed
Rear	Middle	128	Suppressed
Facing	Rearward	133	Suppressed
Unbelted	Forward 8 *	N/A	Suppressed
Rear	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed
Unbelted	Forward 7*	N/A	Suppressed
Forward	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed

<sup>\*</sup> The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft position with respect to the foremost position. (1 = Full Forward; 17 = Full Rearward; 17 notches total Seat Slide travel)

Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R)
Section B Rear Facing CRS

NHTSA NO.:	C85100	TEST DATE:	5/15/08
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	062

CHILD RESTRAINT NAME:	Graco
CHILD RESTRAINT MODEL:	Infant 8457
DATE OF MANUFACTURE:	8-31-2000

Base: On  $\underline{X}$  Off N/A-Restraint does not have a removable base

Manufacturer's design seat back angle:

Tested seat back angle:

Manufacturer's specified anchorage position:

Tested anchorage position:

6th notch
6th notch
Top/Highest
Top/Highest

A blanket and visor were not used in the suppression testing because they did not affect the weight sensing system used on the vehicle.

**Test Summary** 

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward 4 *	130	Suppressed
Rear	Middle	130	Suppressed
Facing	Rearward	131	Suppressed
Unbelted	Forward 8 *	N/A	Suppressed
Rear	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed
Unbelted	Forward 6 *	N/A	Suppressed
Forward	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed

Successful Unbelted 5<sup>th</sup> percentile Female Dummy Reactivation was performed with the seat in the 4<sup>th</sup> Forward position. (SN506)

<sup>\*</sup> The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft position with respect to the foremost position. (1 = Full Forward; 17 = Full Rearward; 17 notches total Seat Slide travel)

Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R)
Section C Forward Facing Convertible CRS

NHTSA NO.:	C85100	TEST DATE:	5/9/08
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	062

CHILD RESTRAINT NAME:	Britax
CHILD RESTRAINT MODEL:	Roundabout 161
DATE OF MANUFACTURE:	7-21-2000

Base: On Off  $\underline{X}$  N/A-Restraint does not have a removable base

Manufacturer's design seat back angle:

Tested seat back angle:

Manufacturer's specified anchorage position:

Tested anchorage position:

6th notch
6th notch
Top/Highest
Top/Highest

A blanket was not used in the suppression testing because it did not affect the weight sensing system used on the vehicle.

**Test Summary** 

1 out out that it is			
Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward	131	Suppressed
Forward	Middle	127	Suppressed
Facing	Rearward	131	Suppressed
Unbelted	Forward	N/A	Suppressed
Forward	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed
Belted	Forward	128	Suppressed
Rear	Middle	129	Suppressed
Facing	Rearward	133	Suppressed
Unbelted	Forward 4 *	N/A	Suppressed
Rear	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed

Successful Unbelted 5<sup>th</sup> percentile Female Dummy Reactivation was performed with the seat in the Forward position. (SN506)

<sup>\*</sup> The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft position with respect to the foremost position. (1 = Full Forward; 17 = Full Rearward; 17 notches total Seat Slide travel)

Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R)
Section C Forward Facing Convertible CRS

NHTSA NO.:	C85100	TEST DATE:	5/9/08
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	062

CHILD RESTRAINT NAME:	Century
CHILD RESTRAINT MODEL:	Encore 4612
DATE OF MANUFACTURE:	8-16-2000

Base: On Off  $\underline{X}$  N/A-Restraint does not have a removable base

Manufacturer's design seat back angle:6th notchTested seat back angle:6th notchManufacturer's specified anchorage position:Top/HighestTested anchorage position:Top/Highest

A blanket was not used in the suppression testing because it did not affect the weight sensing system used on the vehicle.

**Test Summary** 

1001 Cullinuary			
Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward	128	Suppressed
Forward	Middle	133	Suppressed
Facing	Rearward	127	Suppressed
Unbelted	Forward	N/A	Suppressed
Forward	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed
Belted	Forward 3 *	130	Suppressed
Rear	Middle	128	Suppressed
Facing	Rearward	129	Suppressed
Unbelted	Forward 6 *	N/A	Suppressed
Rear	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed

Successful Unbelted 5<sup>th</sup> percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN506)

<sup>\*</sup> The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft position with respect to the foremost position. (1 = Full Forward; 17 = Full Rearward; 17 notches total Seat Slide travel)

Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R)
Section C Forward Facing Convertible CRS

NHTSA NO.:	C85100	TEST DATE:	5/9/08
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	062

CHILD RESTRAINT NAME:	Evenflo
CHILD RESTRAINT MODEL:	Medallion 254
DATE OF MANUFACTURE:	6-1-2000

Base: On Off  $\underline{X}$  N/A-Restraint does not have a removable base

Manufacturer's design seat back angle:

Tested seat back angle:

Manufacturer's specified anchorage position:

Tested anchorage position:

6th notch
6th notch
Top/Highest
Top/Highest

A blanket was not used in the suppression testing because it did not affect the weight sensing system used on the vehicle.

**Test Summary** 

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward	131	Suppressed
Forward	Middle	132	Suppressed
Facing	Rearward	127	Suppressed
Unbelted	Forward	N/A	Suppressed
Forward	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed
Belted	Forward 3 *	130	Suppressed
Rear	Middle	133	Suppressed
Facing	Rearward	131	Suppressed
Unbelted	Forward 6 *	N/A	Suppressed
Rear	Middle	N/A	Suppressed
Facing	Rearward	N/A	Suppressed

Successful Unbelted 5<sup>th</sup> percentile Female Dummy Reactivation was performed with the seat in the Rearward position. (SN506)

<sup>\*</sup> The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft position with respect to the foremost position. (1 = Full Forward; 17 = Full Rearward; 17 notches total Seat Slide travel)

Suppression Test Using Newborn Infant Dummy (Part 572, Subpart K)
Section A Car Bed

NHTSA NO.:	C85100	TEST DATE:	5/12/08
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	Newborn Infant	DUMMY SERIAL NO.:	003

CAR BED NAME:	Cosco	
CAR BED MODEL:	Dream Ride 02-719	
DATE OF MANUFACTURE:	6-16-2000	

Base: \_\_On \_\_Off \_X\_N/A-Restraint does not have a removable base (A car bed with a removable base shall be treated as two separate models, i.e. this form and test procedure will be completed with the base on and then repeated on a new form with the base off.

Manufacturer's design seat back angle:

Tested seat back angle:

Manufacturer's specified anchorage position:

Tested anchorage position:

Top/Highest

Top/Highest

A blanket and visor were not used in the suppression testing because they did not affect the weight sensing system used on the vehicle.

**Test Summary** 

Seat Belt	Seat Slide	Result
	Forward	Won't Fit
Belted	Middle	Suppressed
	Rearward	Suppressed

Successful Unbelted 5<sup>th</sup> percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN506)

Suppression Test Using 3 Year Old Dummy And Booster Seats (Part 572, Subpart P)
Section D Forward Facing Belt Positioning Booster

NHTSA NO.:	C85100	TEST DATE:	5/9/08
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	3 Year Old	DUMMY SERIAL NO.:	032

BOOSTER SEAT NAME:	Century
BOOSTER SEAT MODEL:	Next Step 4920
DATE OF MANUFACTURE:	8-16-2000

Manufacturer's design seat back angle:

Tested seat back angle:

Manufacturer's specified anchorage position:

Tested anchorage position:

Top/Highest

**Test Summary** 

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward	17	Suppressed
Forward Facing	Middle	16	Suppressed
Without Harness	Rearward	13	Suppressed
Belted	Forward	130	Suppressed
Forward Facing	Middle	130	Suppressed
Cinched With Harness	Rearward	127	Suppressed

Successful Unbelted 5<sup>th</sup> percentile Female Dummy Reactivation was performed with the seat in the Rearward position. (SN506)

Suppression Test Using 3 Year Old Dummy And Booster Seats (Part 572, Subpart P)
Section D Forward Facing Toddler Belt Positioning Booster Seat

NHTSA NO.:	C85100	TEST DATE:	5/9/08
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	3 Year Old	DUMMY SERIAL NO.:	032

BOOSTER SEAT NAME:	Cosco
BOOSTER SEAT MODEL:	High Back Booster 02-442
DATE OF MANUFACTURE:	4-28-2000

Manufacturer's design seat back angle:

Tested seat back angle:

Manufacturer's specified anchorage position:

Tested anchorage position:

Top/Highest

**Test Summary** 

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward 3 *	11	Suppressed
Forward Facing	Middle	15	Suppressed
Without Harness	Rearward	12	Suppressed
Belted	Forward 3 *	130	Suppressed
Forward Facing	Middle	127	Suppressed
Cinched With Harness	Rearward	127	Suppressed

Successful Unbelted 5<sup>th</sup> percentile Female Dummy Reactivation was performed with the seat in the 3<sup>rd</sup> Forward position. (SN506)

<sup>\*</sup> The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft position with respect to the foremost position. (1 = Full Forward; 17 = Full Rearward; 17 notches total Seat Slide travel)

Suppression Test Using 3 Year Old Dummy And Convertible Restraints (Part 572, Subpart P)
Section C Forward Facing Convertible CRS

NHTSA NO.:	C85100	TEST DATE:	5/9/08
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	3 Year Old	DUMMY SERIAL NO.:	032

CHILD RESTRAINT NAME:	Britax
CHILD RESTRAINT MODEL:	Roundabout 161
DATE OF MANUFACTURE:	7-21-2000

Manufacturer's design seat back angle:

Tested seat back angle:

Manufacturer's specified anchorage position:

Tested anchorage position:

Top/Highest

**Test Summary** 

Seat Belt	Seat Slide	Cinch Load (N)	Result
	Forward 4 *	130	Suppressed
Belted	Middle	131	Suppressed
	Rearward	133	Suppressed

Successful Unbelted 5<sup>th</sup> percentile Female Dummy Reactivation was performed with the seat in the Rearward position. (SN506)

<sup>\*</sup> The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft position with respect to the foremost position. (1 = Full Forward; 17 = Full Rearward; 17 notches total Seat Slide travel)

Suppression Test Using 3 Year Old Dummy And Convertible Restraints (Part 572, Subpart P)
Section C Forward Facing Convertible CRS

NHTSA NO.:	C85100	TEST DATE:	5/9/08
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	3 Year Old	DUMMY SERIAL NO.:	032

CHILD RESTRAINT NAME:	Century
CHILD RESTRAINT MODEL:	Encore 4612
DATE OF MANUFACTURE:	8-16-2000

Manufacturer's design seat back angle:

Tested seat back angle:

Manufacturer's specified anchorage position:

Tested anchorage position:

Top/Highest

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
	Forward 4 *	130	Suppressed
Belted	Middle	132	Suppressed
	Rearward	130	Suppressed

Successful Unbelted 5<sup>th</sup> percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN506)

<sup>\*</sup> The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft position with respect to the foremost position. (1 = Full Forward; 17 = Full Rearward; 17 notches total Seat Slide travel)

Suppression Test Using 3 Year Old Dummy And Convertible Restraints (Part 572, Subpart P)
Section C Forward Facing Convertible CRS

NHTSA NO.:	C85100	TEST DATE:	5/9/08
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	3 Year Old	DUMMY SERIAL NO.:	032

CHILD RESTRAINT NAME:	Evenflo
CHILD RESTRAINT MODEL:	Medallion 254
DATE OF MANUFACTURE:	6-1-2000

Manufacturer's design seat back angle:

Tested seat back angle:

Manufacturer's specified anchorage position:

Tested anchorage position:

Top/Highest

**Test Summary** 

Seat Belt	Seat Slide	Cinch Load (N)	Result
	Forward 2 *	127	Suppressed
Belted	Middle	133	Suppressed
	Rearward	130	Suppressed

Successful Unbelted 5<sup>th</sup> percentile Female Dummy Reactivation was performed with the seat in the 2<sup>nd</sup> Forward position. (SN506)

<sup>\*</sup> The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft position with respect to the foremost position. (1 = Full Forward; 17 = Full Rearward; 17 notches total Seat Slide travel)

Suppression Test Using An Unbelted 3 Year Old Dummy (Part 572, Subpart P)
No CRS

NHTSA NO.:	C85100	TEST DATE:	5/12/08
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	3 Year Old	DUMMY SERIAL NO.:	032

**Test Summary** 

rest Summary				
Position	Seat Slide	Seat Back Angle	Result	
Position 1	Forward	89°	Suppressed	
Sitting on seat with back against	Middle	89°	Suppressed	
seat back	Rearward	89°	Suppressed	
Position 2	Forward	65.6°	Suppressed	
Sitting on seat with back against	Middle	65.6°	Suppressed	
reclined seat back	Rearward	65.6°	Suppressed	
Position 3	Forward	89°	Suppressed	
Sitting on seat with back not against	Middle	89°	Suppressed	
seat back	Rearward	89°	Suppressed	
Position 4	Forward	89°	Suppressed	
Sitting on seat edge, spine vertical,	Middle	89°	Suppressed	
hands at dummy's sides	Rearward	89°	Suppressed	
Position 5	Forward	89°	Suppressed	
Standing on seat, facing forward	Middle	89°	Suppressed	
Standing on Seat, lacing forward	Rearward	89°	Suppressed	
Position 6	Forward	89°	Suppressed	
Kneeling on seat, facing forward	Middle	89°	Suppressed	
Kneeming on Seat, lacing forward	Rearward	89°	Suppressed	
Position 7	Forward	89°	Suppressed	
Kneeling on seat, facing rearward	Middle	89°	Suppressed	
Kileeling on Seat, lacing learward	Rearward	89°	Suppressed	
Position 8	Forward	N/A	N/A	
Lying on seat. (Three designated	Middle	N/A	N/A	
seating positions only)	Rearward	N/A	N/A	

Successful Unbelted  $5^{\text{th}}$  percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN506)

Suppression Test Using 6 Year Old Dummy And Booster Seats (Part 572, Subpart N)
Section D Forward Facing Toddler Belt Positioning Booster Seat

NHTSA NO.:	C85100	TEST DATE:	5/12/08
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	6 Year Old	DUMMY SERIAL NO.:	153

BOOSTER SEAT NAME:	Century
BOOSTER SEAT MODEL:	Next Step 4920
DATE OF MANUFACTURE:	8-16-2000

Manufacturer's design seat back angle:6th notchTested seat back angle:6th notchManufacturer's specified anchorage position:Top/HighestTested anchorage position:Top/Highest

**Test Summary** 

Seat Belt	Seat Slide	Belt Load (N)	Result
	Forward	18	Suppressed
Belted	Middle	11	Suppressed
	Rearward	17	Suppressed

Successful Unbelted 5<sup>th</sup> percentile Female Dummy Reactivation was performed with the seat in the Forward position. (SN506)

Suppression Test Using 6 Year Old Dummy And Booster Seats (Part 572, Subpart N)
Section D Forward Facing Toddler Belt Positioning Booster Seat

NHTSA NO.:	C85100	TEST DATE:	5/12/08
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	6 Year Old	DUMMY SERIAL NO.:	153

BOOSTER SEAT NAME:	Cosco
BOOSTER SEAT MODEL:	High Back Booster 02-442
DATE OF MANUFACTURE:	4-28-2000

Manufacturer's design seat back angle:6th notchTested seat back angle:6th notchManufacturer's specified anchorage position:Top/HighestTested anchorage position:Top/Highest

**Test Summary** 

Seat Belt	Seat Slide	Belt Load (N)	Result
	Forward	16	Suppressed
Belted	Middle	16	Suppressed
	Rearward	13	Suppressed

Successful Unbelted 5<sup>th</sup> percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN506)

Suppression Test Using 6-Year-Old Dummy And Booster Seats (Part 572, Subpart N)
Section D Forward Facing Toddler Belt Positioning Booster Seat

NHTSA NO.:	C85100	TEST DATE:	5/12/08
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	6 Year Old	DUMMY SERIAL NO.:	153

BOOSTER SEAT NAME:	Evenflo
BOOSTER SEAT MODEL:	Right Fit 245
DATE OF MANUFACTURE:	6-26-2000

Manufacturer's design seat back angle:6th notchTested seat back angle:6th notchManufacturer's specified anchorage position:Top/HighestTested anchorage position:Top/Highest

**Test Summary** 

Seat Belt	Seat Slide	Belt Load (N)	Result
	Forward	12	Suppressed
Belted	Middle	15	Suppressed
	Rearward	11	Suppressed

Successful Unbelted 5<sup>th</sup> percentile Female Dummy Reactivation was performed with the seat in the Rearward position. (SN506)

Suppression Test Using An Unbelted 6-Year-Old Dummy (Part 572, Subpart N) No CRS

NHTSA NO.:	C85100	TEST DATE:	5/9/08
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	6 Year Old	DUMMY SERIAL NO.:	155

# **Test Summary**

Position	Seat Slide	Seat Back Angle	Result
Position 1	Forward	89°	Won't Fit
Sitting on seat with back against	Middle	89°	Suppressed
seat back	Rearward	89°	Suppressed
Position 2	Forward	65.6°	Won't Fit
Sitting on seat with back against	Middle	65.6°	Suppressed
reclined seat back	Rearward	65.6°	Suppressed
Position 3	Forward	89°	Suppressed
Sitting on seat edge, spine vertical,	Middle	89°	Suppressed
hands at dummy's sides	Rearward	89°	Suppressed
Position 4	Forward	89°	Won't Fit
Sitting on seat with back against	Middle	89°	Suppressed
seat back then leaning on the door	Rearward	89°	Suppressed

Successful Unbelted  $5^{\text{th}}$  percentile Female Dummy Reactivation was performed with the seat in the Rearward position. (SN506)

Low Risk Deployment Tests Using an Unbelted 5<sup>th</sup> Percentile Female Dummy (Part 572, Subpart O) (S26) Position 1 - Chin On Module (S26.2)

NHTSA NO.:	C85100	TEST DATE:	6/9/08
LABORATORY:	MGA	TECHNICIANS:	AP
DUMMY TYPE:	5 <sup>th</sup> Percentile Female	DUMMY SERIAL NO.:	511

Manufacturer's design seat back angle:5th notchTested seat back angle:5th notchTested seat position:Full Aft

Tested steering wheel angle: 28.5°
Thorax cavity angle: 34.6°

Bottom of chin height: <u>1 mm Above Module</u>

**Air Bag Deployment Timing** 

Stage No.	Firing time (ms)	Recorded firing time (ms)
1	0.0	0.3
2	100.0	100.3

5<sup>th</sup> Percentile Female SN 511 Position 1 (Chin On Module) 6/9/08

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	16
Peak Nij (Nte)	1.0	0.3
Time (ms)	NA	85.4
Peak Nij (Ntf)	1.0	0.2
Time (ms)	NA	41.4
Peak Nij (Nce)	1.0	0.2
Time (ms)	NA	190.4
Peak Nij (Ncf)	1.0	0.1
Time (ms)	NA	225.0
Neck Tension	2070 N	686
Neck Compression	2520 N	174
Chest g	60 g	7
Chest Displacement	52 mm	6
Left Femur	6805 N	40
Right Femur	6805 N	41

Calculated on data recorded for 125 ms after the initiation of the final stage of air bag deployment designed to deploy in any full frontal rigid barrier crash up to 26 km/h. (S4.11(d))

Second stage fire time of 100 ms; Injuries calculated on 0 ms to 225 ms

The original equipment parts were used for this deployment.

Low Risk Deployment Tests Using an Unbelted 5<sup>th</sup> Percentile Female Dummy (Part 572, Subpart O) (S26) Position 2 - Chin On Rim (S26.3)

NHTSA NO.:	C85100	TEST DATE:	6/9/08
LABORATORY:	MGA	TECHNICIANS:	AP
DUMMY TYPE:	5 <sup>th</sup> Percentile Female	DUMMY SERIAL NO.:	511

Manufacturer's design seat back angle:5th notchTested seat back angle:5th notchTested seat position:Full Aft

Tested steering wheel angle:  $\underline{28.0^{\circ}}$ Thorax cavity angle:  $\underline{34.0^{\circ}}$ 

Chin Point height: <u>0 mm - At Steering Wheel Target</u>
Note: The chin on rim steering wheel target is 10 mm below the highest point on the steering wheel

Air Bag Deployment Timing

	<u> </u>	
Stage No.	Firing time (ms)	Recorded firing time (ms)
1	0.0	0.3
2	100.0	100.3

5<sup>th</sup> Percentile Female SN 511 Position 2 (Chin On Rim) 6/9/08

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	6
Peak Nij (Nte)	1.0	0.2
Time (ms)	NA	115.5
Peak Nij (Ntf)	1.0	0.2
Time (ms)	NA	37.7
Peak Nij (Nce)	1.0	0.1
Time (ms)	NA	194.0
Peak Nij (Ncf)	1.0	0.0
Time (ms)	NA	6.7
Neck Tension	2070 N	586
Neck Compression	2520 N	76
Chest g	60 g	7
Chest Displacement	52 mm	11
Left Femur	6805 N	13
Right Femur	6805 N	17

Calculated on data recorded for 125ms after the initiation of the final stage of air bag deployment designed to deploy in any full frontal rigid barrier crash up to 26 km/h. (S4.11(d))

Second stage fire time of 100 ms; Injuries calculated on 0 ms to 225 ms

A new air bag and original equipment, steering column and steering wheel were used for this deployment.

## VEHICLE WEIGHT, FUEL TANK, AND ATTITUDE DATA

Test Vehicle: 2008 Toyota Scion XB NHTSA No.: C85100
Test Program: FMVSS 208 Compliance Test Date: 7/1/08

Test Technician: <u>Jamie Aide</u>

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IMPACT ANGLE:	Zero Degrees					
BELTED DUMMIES (YES/NO):	No					
TEST SPEED:	X 32 to 40 kmph 0 to 48 kmph 0 to 56 kmph					
DRIVER DUMMY:	X 5 <sup>th</sup> female 50 <sup>th</sup> male					
PASSENGER DUMMY:	X 5 <sup>th</sup> female 50 <sup>th</sup> male					

X 1. Fill the transmission with transmission fluid to the satisfactory range.

2. Drain fuel from vehicle

3. Run the engine until fuel remaining in the fuel delivery system is used and the engine stops.

Record the useable fuel tank capacity supplied by the COTR
 Useable Fuel Tank Capacity supplied by COTR: 53.0 liters (14.0 gallons)

Record the fuel tank capacity supplied in the owner's manual.
 Useable Fuel Tank Capacity in owner's manual: 53.0 liters (14.0 gallons)

6. Using purple dyed Stoddard solvent having the physical and chemical properties of Type 1 solvent or cleaning fluid, Table 1, ASTM Standard D484-71, "Standard Specifications for Hydrocarbon Dry-cleaning Solvents," or gasoline, fill the fuel tank.

Amount Added: 53.0 liters (14.0 gallons)
7. Fill the coolant system to capacity.

8. Fill the engine with motor oil to the Max. mark on the dip stick.

9. Fill the brake reservoir with brake fluid to its normal level.

10. Fill the windshield washer reservoir to capacity.11. Inflate the tires to the tire pressure on the tire placard. If no tire placard is available, inflate

the tires to the recommended pressure in the owner's manual.

Tire placard pressure:	RF:	35 psi	LF:	35 psi	RR:	32 psi	LR:	32 psi
Owner's manual pressure:	RF:	35 psi	LF:	35 psi	RR:	32 psi	LR:	32 psi
Actual inflated pressure:	RF:	35 psi	LF:	35 psi	RR:	32 psi	LR:	32 psi

Record the vehicle weight at each wheel to determine the unloaded vehicle weight (UVW),
 i.e. "as delivered" weight).

Right Front (kg):	427.3	Right Rear (kg):	256.7
Left Front (kg):	424.1	Left Rear (kg):	270.8
Total Front (kg):	851.4	Total Rear (kg):	527.5
% Total Weight:	61.8	% Total Weight:	38.2
UVW = TOTAL FRONT PLUS TOTAL REAR (KG):			1378.9

X 13. UVW Test Vehicle Attitude: (All dimensions in millimeters)

13.1 Mark a point on the vehicle above the center of each wheel.

13.2 Place the vehicle on a level surface.

X	13.3	Measure perpendicular to the level surface to the 4 points marked on the body and record the measurements									
		RF: 682 LF: 683 RR: 723 LR: 717									
X	14.	Calculate the Rated Cargo and Luggage Weight (RCLW): 45 kg									
X	14.1	Does the vehicle have the vehicle capacity weight (VCW) on the certification label or tire placard?									
X		Yes, go to 14.3 No, go to 14.2									
	14.2	VCW = Gross Vehicle Weight - UVW									
		VCW = =									
X	14.3	VCW = <u>385 kg (850 lbs)</u>									
X	14.4	Does the certification or tire placard contain the Designated Seating Capacity (DSC)?									
		X Yes, go to 14.6									
		No, go to 14.5 and skip 14.6									
	14.5	DSC = Total number of seat belt assemblies =									
X	14.6	DSC = <u>5</u>									
X	14.7	RCLW = VCW - (68 kg x DSC) = <u>385 kg</u> - (68 kg x <u>5</u> ) = <u>45 kg</u>									
X	14.8	Is the vehicle certified as a truck, MPV or bus (see the certification label on the door jamb)?									
		X Yes, if the calculated RCLW is greater than 136 kg, use 136 kg as the RCLW. (S8.1.									
		No, use the RCLW calculated in 14.7									
X	15.	Fully Loaded Weight (100% fuel fill): 1522.2 kg									
X	15.1	Place the appropriate test dummy in both front outboard seating positions.									
		Driver: $\underline{X} 5^{th}$ female $ 50^{th}$ male Passenger: $\underline{X} 5^{th}$ female $ 50^{th}$ male									
X	15.2	Load the vehicle with the RCLW from 14.7 or 14.8 whichever is applicable.									
X	15.3	Place the RCLW in the cargo area. Center the load over the longitudinal centerline of the vehicle. (S8.1.1 (d))									
X	15.4	Record the vehicle weight at each wheel to determine the Fully Loaded Weight.									
		Right Front (kg): 449.1 Right Rear (kg): 308.4									
		Left Front (kg): 443.6 Left Rear (kg): 321.1									
		Total Front (kg):         892.7         Total Rear (kg):         629.5           % Total Weight:         58.6         % Total Weight:         41.4									
		% Total Weight:       58.6       % Total Weight:       41.4         % GVW       55.3       % GVW       45.8									
		(% GVW = Axle GVW divided by Vehicle GVW)									
		Fully Loaded Weight = Total Front Plus Total Rear (kg): 1522.2									
	4.0										
X	16.	Fully Loaded Test Vehicle Attitude: (All dimensions in millimeters)									
X	16.1	Place the vehicle on a level surface.									

X	16.2	Measure perpendicular to the level surface to the 4 points marked on the body (see 13.1 above) and record the measurements							
		RF: 674 LF: 675 RR: 699 LR: 700							
X	17.	Drain the fuel system							
X	18.	Using purple dyed Stoddard solvent having the physical and chemical properties of Type 1 solvent or cleaning fluid, Table 1, ASTM Standard D484-71, "Standard Specifications for Hydrocarbon Dry-cleaning Solvents," fill the fuel tank to 92 - 94 percent of useable capacity.							
X		Fuel tank capacity x .94 = $\underline{53.0}$ liters (14.0 gallons) x .94 = $\underline{49.8}$ liters (13.2 gallons) Amount added $\underline{49.2}$ liters (13.0 gallons) $\underline{92.9}$ %							
X	19.	Crank the engine to fill the fuel delivery system with Stoddard solvent							
X	20.	Calculate the test weight range.							
X	20.1	Calculated Weight = UVW (see 12 above) + RCLW (see 14 above) + 2x(dummy weight)							
		1521.9  kg = 1378.9  kg + 45.0  kg + 98.0  kg							
X	20.2	Test Weight Range = Calculated Weight (- 4.5 kg, - 9 kg.)  Max. Test Weight = Calculated Test Weight - 4.5 kg = 1517.4 kg  Min. Test Weight = Calculated Test Weight - 9 kg = 1512.9 kg							
X	21.	Remove the RCLW from the cargo area.							
X	22.	Drain transmission fluid, engine coolant, motor oil, and windshield washer fluid from the test vehicle so that Stoddard solvent leakage from the fuel system will be evident.							
X	23.	Vehicle Components Removed For Weight Reduction: Rear carpet, spare tire, jack and tools							
X	24.	Secure the equipment and ballast in the load carrying area and distribute it, as nearly as possible, to obtain the proportion of axle weight indicated by the gross axle weight ratings and center it over the longitudinal centerline of the vehicle.							

		S .
X	25.	If necessary, add ballast to achieve the actual test weight.

N/A

X Weight of Ballast: 45.4 kg

26.	Ballast, including test equipment, must be contained so that it will not shift during the
	impact event or interfere with data collection or interfere with high-speed film recordings or
	affect the structural integrity of the vehicle or do anything else to affect test results. Care must be taken to assure that any attachment hardware added to the vehicle is not in the vicinity of the fuel tank or lines.

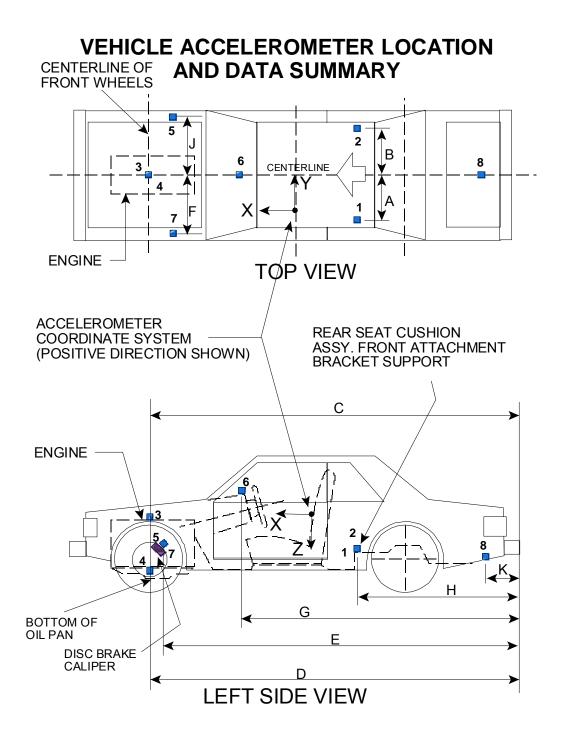
X 27. Record the vehicle weight at each wheel to determine the actual test weight.

Right Front (kg):	460.9 Right Rear (kg):		293.5				
Left Front (kg):	Left Front (kg): 450.9 Left Rear (kg):		309.4				
Total Front (kg):	911.8	Total Rear (kg):	602.9				
% Total Weight: 60.2 % Total Weight		% Total Weight:	39.8				
% GVW	45.8						
(% GVW = Axle GVW divided by Vehicle GVW)							
TOTAL FRONT PLU	TOTAL FRONT PLUS TOTAL ŘEAR (kg): 1514.7						

Y	28.	Is the to	est weight	t betw	een the	Max. W	/eight ai	nd the I	Min. We	iaht (See	e 20.2)?	
<u> </u>	_0.	X Yes	_				0.9			.9 (00	<i>z</i> = <i>v</i> .= <i>y</i> .	
		No	, explain v	vhy no	ot.							
X	29.	Test W	eight Veh	icle A	ttitude: (a	all dime	ensions	in millir	neters)			
X	29.1	Place t	he vehicle	on a	level su	rface						
X	29.2		re perpenand record					the 4 p	oints m	arked or	ı the body	/ (see 13
		RF:	675	LF:	676	RR:	704	LR:	706			
X	30.	Summa	ary of test	attitud	de							
X	30.1	AS DE	LIVERED									
		RF:	682	LF:	683	RR:	723	LR:	717			
		Kr.	002	LF.	003	KK.	123	LK.	7 1 7			
		AS TES	STED:									
		DE:	675	l I E	676	RR:	704	I D:	706			
		RF:	0/3	LF:	070	KK.	704	LR:	700			
		<b>-</b> 111137	LOADED									
		FULLY	LOADED	):								
		RF:	674	LF:	675	RR:	699	LR:	700			
X	30.2	Is the " attitude	as tested" e?	test a	attitude e	equal to	or betw	een th	e "fully lo	oaded" a	ınd "as de	elivered"
		X Yes	S									
		No.	, explain v	vhy no	ot.							
			·									
REM	ARKS:											
I certi	ify that I	have r	ead and	perf	ormed	each i	instruc	tion.				
Signa	ture:	Jane	ie Cut	2			Date	e:	7/1	/08		

## VEHICLE ACCELEROMETER LOCATION AND MEASUREMENT

Test Vehicle: Test Program Test Technicia				HTSA No.: est Date:	<u>C85100</u> <u>7/1/08</u>
IMPACT AND	u <b>-</b> .	Zara Dagraga			
IMPACT ANG	MIES (YES/NO):	Zero Degrees No			
TEST SPEED		X 32 to 40 kmph	0 to 4	18 kmph	0 to 56 kmph
DRIVER DUM		X 5 <sup>th</sup> fe			50 <sup>th</sup> male
PASSENGER		X 5 <sup>th</sup> fe			50 <sup>th</sup> male
.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		<u></u>	aro		india.
X 1.	vehicle and through left rear seat cross	nere the vertical plane in the center of the left f member. Install an ac- acord x-direction accele	ront outboard sea	ating position is intersection	intersects the on the rear seat
χ 2.	vehicle and through right rear seat cross	nere the vertical plane in the center of the right is member. Install an a to record x-direction a	front outboard se	eating positior his intersection	n intersects the on on the rear
Х 3.	and a vertical trans the engine intersectorecord x-direction	here a vertical plane the verse plane through the tat the top of the enging accelerations. Record	e center of the tw ne. Install an acc d the location on	o wheels on on the selerometer at the following	opposite sides of this intersection chart.
X 4.	and a vertical trans the engine intersec	here a vertical plane the verse plane through the time the bottom of the engred x-direction accelerated.	e center of the tw ine. Install an ac	o wheels on occelerometer a	opposite sides of at this
X 5.		neter on the right front ord the location on the		ecord x-direct	ion
X 6.	intersects the top of	here a vertical plane th f the instrument panel. ccelerations. Record t	Install an accele	erometer at thi	s intersection to
X 7.		neter on the left front b on the following chart	rake caliper to re	cord x-direction	on accelerations.
X 8.	intersects the floor	here a vertical plane th of the trunk. Install an rd z-direction accelerat	accelerometer or	n the trunk flo	or at this
REMARKS:					
I certify that I	have read and perf	ormed each instructi	on.		
Signature:	Jamie Cut	Date: _	7/1/08		



Dimensions Corresponding To The Letters "A" Through "K" (Excluding "I") Are Recorded In The Table On The Following Page.

Accelerometers Corresponding To The Numbers 1 Through 8 Are Specified On The Preceding Page.

# DATA SHEET 33 VEHICLE ACCELEROMETER LOCATION AND MEASUREMENTS

DIMENSION	LENGTH (mm)			
	PRETEST VALUES			
A (LH Rear Seat Xmbr)	35	57		
B (RH Rear Seat Xmbr)	35	57		
C (Engine Top)	250	68		
<u>D</u> (Engine Bottom)	25	74		
E (Caliper)	Right Side: 3514	Left Side: 3514		
F (Left Caliper)	66	37		
<u>G</u> (IP)	28	92		
H (Seat)	1592			
<u>J</u> (Right Caliper)	667			
K (Trunk)	835			
	POST TEST VALUES			
A (LH Rear Seat Xmbr)	35	57		
B (RH Rear Seat Xmbr)	35	57		
C (Engine Top)	25	17		
<u>D</u> (Engine Bottom)	252	21		
E (Caliper)	Right Side: 3502	Right Side: 3501		
F (Left Caliper)	66	64		
<u>G</u> (IP)	2878			
H (Seat)	1592			
J (Right Caliper)	664			
K (Trunk)	83	35		

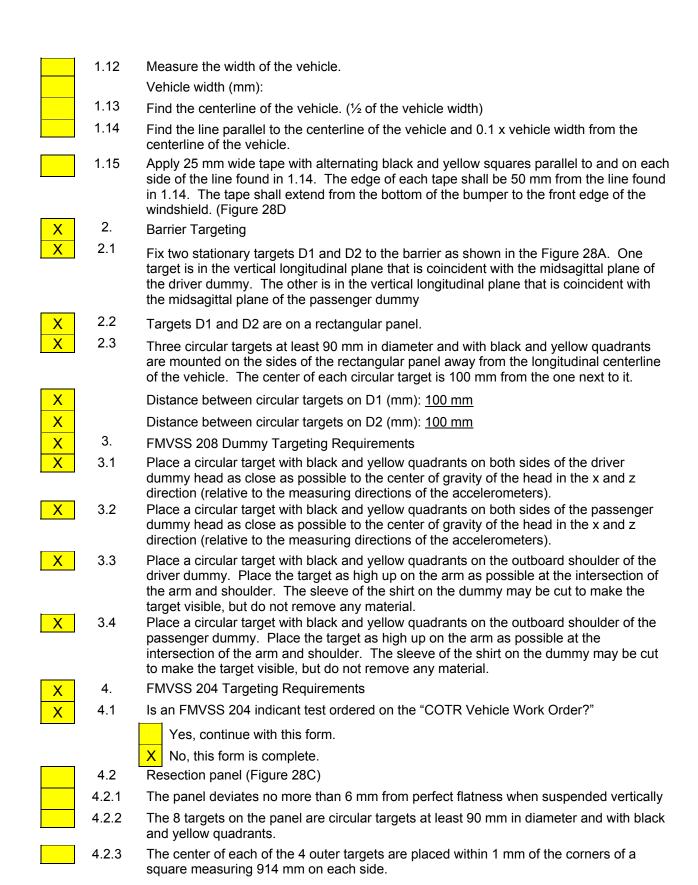
#### **PHOTOGRAPHIC TARGETS**

Test Vehicle: 2008 Toyota Scion XB NHTSA No.: <u>C85100</u> Test Program: Test Technician: 7/1/08 FMVSS 208 Compliance Test Date:

Jamie Aide

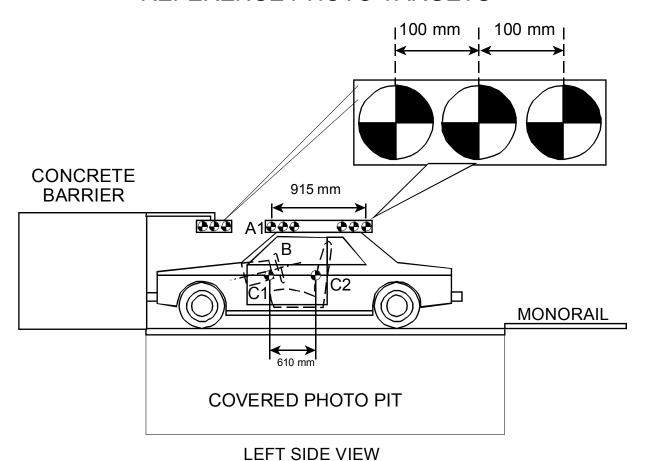
IMPACT ANGLE:	Zero Degrees					
BELTED DUMMIES (YES/NO):	): No					
TEST SPEED:	X 32 to 40 kmph 0 to 48 kmph			0 to 56 kmph		
DRIVER DUMMY:	X 5 <sup>th</sup> female		50 <sup>th</sup> male			
PASSENGER DUMMY:	X 5 <sup>th</sup> female 50 <sup>th</sup> male			_50 <sup>th</sup> male		

X	1.	FMVSS 208 vehicle targeting requirements (See Figures 28A and 28B)
X	1.1	Targets A1 and A2 are on flat rectangular panels.
X	1.2	Three circular targets at least 90 mm in diameter and with black and yellow quadrants are mounted at the front on the outboard sides of A1 and A2. The center of each circular target is 100 mm from the one next to it.
X		Distance between targets (mm): 100 mm
X	1.3	Three circular targets at least 90 mm in diameter and with black and yellow quadrants are mounted at the back on the outboard sides of on A1 and A2. The center of each circular target is 100 mm from the one next to it.  Distance between targets (mm): 100 mm
X	1.4	The distance between the first circular target at the front of A1 and A2 and the last circular target at the back of A1 and A2 is at least 915 mm.
X		Distance between the first and last circular targets (mm): 915 mm
X	1.5	Firmly fix target A1 on the vehicle roof in the vertical longitudinal plane that is coincident with the midsagittal plane of the driver dummy.
X	1.6	Firmly fix target A2 on the vehicle roof in the vertical longitudinal plane that is coincident with the midsagittal plane of the passenger dummy.
X	1.7	Two circular targets (C1 and C2) at least 90 mm in diameter and with black and yellow quadrants are mounted on the outside of the driver door. The centers of each circular target are at least 610 mm apart.
X		Distance between targets (mm): 612 mm
X	1.8	Two circular targets (C1 and C2) at least 90 mm in diameter and with black and yellow quadrants are mounted on the outside of the passenger door. The centers of each circular target are at least 610 mm apart.
X		Distance between targets (mm): 613 mm
X	1.9	Place tape with squares having alternating colors on the top portion of the steering wheel.
X	1.10	Chalk the bottom portion of the steering wheel
X	1.11	Is this an offset test?
		Yes, continue with this section
		X No, go to 2.

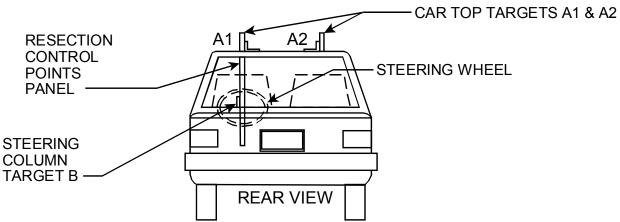


	4.2.4	Locate another square with 228 mm sides and with the center of this square coincident with the center of the 914 mm square.
	4.2.5	The center of the 4 inner targets are placed at the midpoints of each of the 228 mm sides.
	4.3	Place a circular target at least 90 mm in diameter and with black and yellow quadrants on a material (cardboard, metal, etc.) that can be taped to the top of the steering column
	4.4	Tape the target from 4.3 to the top of the steering column in a manner that does not interfere with the movement of the steering column in a crash
REM	IARKS:	
I cer	tify that I	have read and performed each instruction.
Sign	ature:	

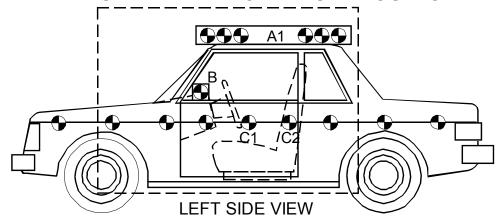
## **REFERENCE PHOTO TARGETS**



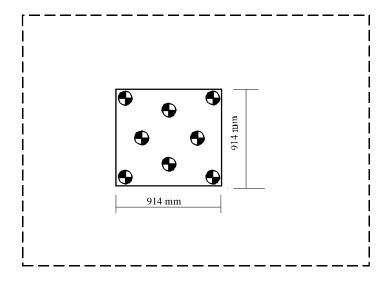
## RESECTION PANEL TARGETING ALIGNMENT



## TEST RUN STEERING COLUMN CAMERA VIEW OF TYPICAL TIME ZERO VEHICLE POSITION



## PRE-RUN STEERING COLUMN HIGH SPEED CAMERA VIEW



LEFT SIDE VIEW

## **DATA SHEET 35 CAMERA LOCATIONS**

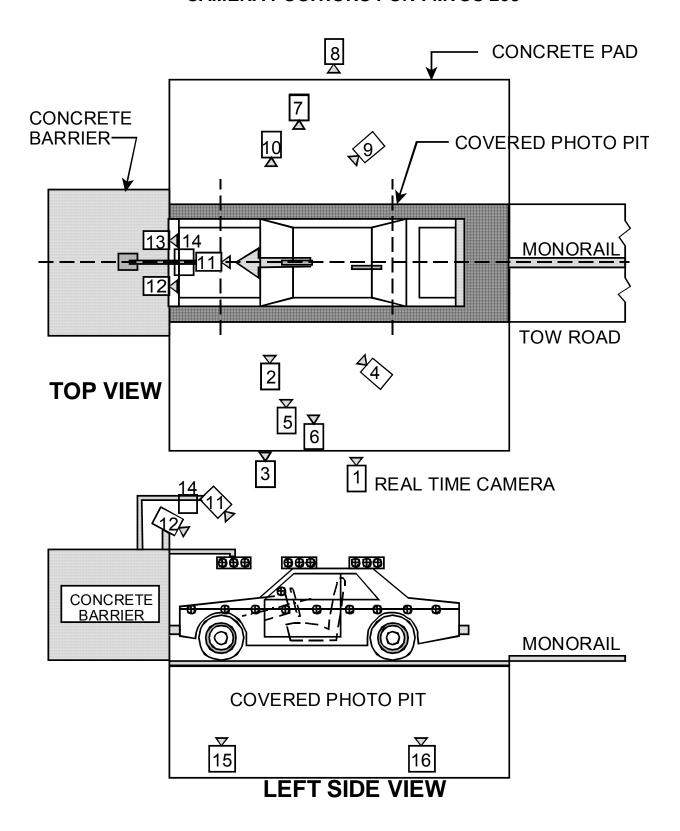
2008 Toyota Scion XB Test Vehicle: NHTSA No.: C85100 7/1/08 Test Program: FMVSS 208 Compliance Test Date: 11:05 am Time:

CAMERA NO.	VIEW	CAME	RA POSIT (mm) *	LENS (mm)	SPEED (fps)	
		Х	Υ	Z		
1	Real Time Left Side View				13	24
2	Left Side View (Barrier face to front seat backs)	1240	-5040	1100	24	1000
3	Left Side View (Driver)	1225	-5470	1345	35	1000
4	Left Side View (B-post aimed toward center of steering wheel)	6325	-4685	2140	50	1000
5	Left Side View (Steering Column)	925	-5300	1225	25	1000
6	Left Side View (Steering Column)	925	-5330	850	25	1000
7	Right Side View (Overall)	1850	5785	1250	24	1000
8	Right Side View (Passenger)	1265	5480	1370	35	1000
9	Right Side View (Angle)	6280	4900	2140	50	1000
10	Right Side View (Front door)	1175	5100	1105	24	1000
11	Front View Windshield	-315	0	2830	12.5	1000
12	Front View Driver	-135	-395	2240	24	1000
13	Front View Passenger	-110	505	2240	24	1000
14	Overhead Barrier Impact View	1190	0	5050	14	1000
15	Pit Camera Engine View	1190	0	-3150	24	1000
16	Pit Camera Fuel Tank View	3200	0	-3150	24	1000

#### \*COORDINATES:

- +X forward of impact plane +Y right of monorail centerline +Z above ground level

#### **CAMERA POSITIONS FOR FMVSS 208**



# APPENDIX G DUMMY POSITIONING PROCEDURES FOR 5<sup>th</sup>% DRIVER TEST DUMMY CONFORMING TO SUBPART O OF PART 572

Test Vehicle:	2008 Toyota Scion XB	NHTSA No.:	C85100
Test Program:	FMVSS 208 Compliance	Test Date:	<u>7/1/08</u>

Test Technician: Tim Bratz

IMPACT ANGLE:	Zero Degrees			
BELTED DUMMIES (YES/NO):	No			
TEST SPEED:	_X_ 32 to 40 kmph	0 to 4	8 kmph	0 to 56 kmph
DRIVER DUMMY:	<u>X</u> 5 <sup>th</sup> female		_	_ 50 <sup>th</sup> male
PASSENGER DUMMY:	X 5 <sup>th</sup> female			50 <sup>th</sup> male

- X 1. Using the markings made from data sheet 14.3 (If not done previously or steering repairs have been made, complete data sheet 14.3 at this time.) to position the steering controls in the mid-position or if applicable next lowest detent position. (S16.2.9)
- X2. Place the SCRP in the full rearward, mid-height position, and mid-seat cushion angle, determined during the completion of Data Sheet 14.1. (S16.3.2.1.1)
- X 3. If the vehicle has an adjustable accelerator pedal, place it in the full forward position. (S16.3.2.2.1)
  X N/A accelerator pedal not adjustable
- X4. Fully recline the seat back. (S16.3.2.1.2)
  N/A seat back not adjustable.
- X 5. Place the dummy in the seat with the legs at an angle of 120 degrees to the thighs. The calves should not be touching the seat cushion. (S16.3.2.1.2)
- X 6. Position the dummy in the seat such that the midsagittal plane is coincident with the longitudinal seat cushion markings as determined in Data Sheet 14.1. (S16.3.2.1.3 and S16.3.2.1.4)
- X 7. Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic angle. (S16.3.2.1.5)
- X 8. Set the angle between the legs and the thighs to 120 degrees. (S16.3.2.1.6)
- X 9. Set the transverse distance between the centers of the front of the knees at 160 to 170 mm. (6.3 to 6.7 inches) Center the knee separation with respect to the longitudinal seat cushion marking as determined Data Sheet 14.1. (S16.3.2.1.6)

  Record Knee Separation \_\_\_\_\_170\_\_\_
- X 10. Push rearward on the dummy's knees until the pelvis contacts the seat back, or the backs of the calves contact the seat cushion, whichever occurs first. (S16.3.2.1.6)
   Pelvis contacted seat back.
   X Calves contacted seat cushion.

X 11. Gently rock the upper torso ± 5 degrees (approximately 51 mm (2 inches)) side-to-side three time. (S16.3.2.1.7) X 12. If needed, extend the legs until the feet do not contact the floor pan. The thighs should be resting on the seat cushion. (S16.3.2.1.8) X 13. Position the right foot until the foot is in line with a longitudinal vertical plane passing through the center of the accelerator pedal. Maintain the leg and thigh in a vertical plane. (S16.3.2.1.8) X 14. Rotate the left leg and thigh laterally to equalize the distance between each knee and the longitudinal seat cushion marking as determined in Data Sheet 14.1. (S16.3.2.1.8) X 15. Attempt to return the seat to the foremost fore-aft position, mid-height, and seat cushion mid-angle as determined in Data Sheet 14.2. The foot may contact and depress the accelerator and/or change the angle of the foot with respect to the leg. (\$16.3.2.1.8) X Foremost position achieved. Proceed to step 20. Foremost not achieved because of foot interference. Proceed to step 17. Foremost not achieved because of steering wheel contact. 16. If either of the dummy's legs contact the steering wheel, move the steering wheel up the minimum amount required to avoid contact. If the steering wheel is not adjustable separate the knees the minimum required to avoid contact. (S16.3.2.1.8) N/A- there was no leg contact \_\_Steering wheel repositioned Knees separated \_\_17. If the left foot interferes with the clutch or brake pedals, rotate the left foot about the leg to provide clearance. If this is not sufficient, rotate the thigh outboard at the hip the minimum amount required for clearance. (\$16.3.2.1.8) N/A, No foot interference with pedals. Foot adjusted to provide clearance. Foot and Thigh adjusted to provide clearance.

18. Continue to move the seat. Use seat controls to line up the seat markings determined

in the closest detent position that does not cause dummy contact. (S16.3.2.1.8) Foremost, mid-height position and the seat cushion mid-angle reached

Dummy contact. Clearance set at maximum of 5mm

Dummy Contact. Seat set at nearest detent position.

Seat position detent positions

Measured Clearance

(foremost is position zero)

during the completion of Data Sheet 14.1 to set the foremost fore-aft position, mid-height position and the seat cushion mid-angle. If the dummy contacts the interior move the seat rearward until a maximum clearance of 5 mm (0.2 inches) is achieved or the seat is

detent positions rearward of foremost

19.	If the steering wheel was repositioned in step 16, return the steering wheel to the original position. If the steering wheel contacts the dummy before reaching the original position, position the wheel until a maximum clearance of 5mm (.2 inches) is achieved, or the steering wheel is in the closest detent position that does not cause dummy contact. (S16.3.2.1.8) N/A Steering wheel was not repositionedOriginal position achievedDummy contact. Clearance set at maximum of 5mm Measured ClearanceDummy Contact. Steering wheel set at nearest detent position.  Steering wheel position detent positions upward of original position.  (Original position is position zero)
<u>X</u> 20.	If the seat back is adjustable, rotate the seat back forward while holding the thighs in place. Continue rotating the seat back forward until the transverse instrument platform of the dummy head is level ± 0.5 degrees. If the head cannot be leveled using the seat back adjustment, or the seat back is not adjustable, use the lower neck bracket adjustment to level the head. If a level position cannot be achieved, minimize the angle. (S16.3.2.1.9)  X Head Level Achieved. (Check all that apply)  X Head leveled using the adjustable seat back  Head Angle 0.2 degrees  Head Level NOT Achieved. (Check all that apply)  Head adjusted using the adjustable seat back
	Head adjusted using the neck bracket.  Head Angle degrees
<u>X</u> 21.	Verify the pelvis is not interfering with the seat bight. (S16.3.2.1.9)  X No interference Pelvis moved forward the minimum amount so that it is not caught in the seat bight.
<u>X</u> 22.	Verify the dummy abdomen is properly installed. (S16.3.2.1.9)  X Abdomen still seated properly into dummy  Abdomen was adjusted because it was not seated properly into dummy
<u>X</u> 23.	Head Angle $\underline{X}$ N/A, neither the pelvis nor the abdomen were adjusted.
<u>X</u> 23.1	1 Head still level (Go to 24)
23.2	2 Head level adjusted Head Level Achieved. (Check all that apply) Head leveled using the adjustable seat back Head leveled using the neck bracket.  Head Angle
<u>X</u> 24.	If the dummy torso contacts the steering wheel while performing step 20, reposition the steering wheel in the following order to eliminate contact. (S16.3.2.1.9) X N/A, No dummy torso contact with the steering wheel.

24.1	Adjust telescoping mechanism.
	N/A No telescoping adjustment.
	Adjustment performed (fill in appropriate change)
	Steering wheel moved detent positions in the forward direction.
	Steering wheel moved mm in the forward direction.
24.0	A divet tilt me chaniem
24.2	Adjust tilt mechanism.
	N/A No tilt adjustment. No adjustment performed.
	No adjustment performed. Adjustment performed.
	Steering wheel moved detent positions Upward/Downward.
	(circle one)
	Steering wheel moved degrees Upward/Downward
	cteering wheel meved degrees opward/beminard
24.3	Adjust Seat in the aft direction.
	No Adjustment performed.
	Seat moved aft mm from original position.
	Seat moved aft detent positions from the original position.
<u>X</u> 25.	Measure and set the pelvic angle using the pelvic angle gage TE-2504. The pelvic
	angle should be 20.0 degrees $\pm$ 2.5 degrees. If the pelvic angle cannot be set to the
	specified range because the head will not be level or because the dummy will have need
	major repositioning, adjust the pelvis as closely as possible to the angle range, but keep
	the head level. (\$16.3.2.1.11)
	X Pelvic angle set to 20.0 degrees ± 2.5 degrees.
	Pelvic angle of 20.0 degrees not achieved, the angular difference was minimized.
	X Record the pelvic angle. 21.0 degrees
X 26	Check the dummy for contact with the interior after completing adjustments.
<u>//</u> 20.	(S16.3.2.1.12)
	X_No contact.
	Dummy in contact with interior.
	Seat moved aft mm from the previous position.
	Seat moved aft detent positions from the previous position.
<u>X</u> 27.	Check the dummy to see if additional interior clearance is obtained, allowing the seat to
	be moved forward. (S16.3.2.1.12)
	XN/A, Seat already at foremost position.
	Clearance unchanged. No adjustments required.
	Additional clearance available
	Seat moved Forward mm from the previous position.
	Seat moved Forward detent positions from the previous position.
V 00	Debugge for the colling of the first Discourse of the first and the firs
<u>X</u> 28.	Driver's foot positioning, right foot. Place the foot perpendicular to the leg and determine
	if the heel contacts the floor pan at any leg position. If the heel contacts the floor pan
	proceed to step 29 otherwise, proceed to step 30. (S16.3.2.2.1)
X 20	Perform the following steps until either all steps are completed, or the foot contacts the
<u> </u>	accelerator pedal. Step 29.6 shall be completed in all cases. (S16.3.2.2.1(a))
	accolorator poddi. Otop 20.0 Shan be completed in all cases. (0 10.0.2.2.1(a))
X 29.1	With the rear of the heel contacting the floor pan, move the foot forward until pedal
	contact occurs or the foot is at the full forward position.

- \_\_29.2 If the vehicle has an adjustable accelerator pedal, move the pedals rearward until pedal contact occurs or the pedals reach the full rearward position.
- \_\_29.3 Extend the leg, allowing the heel to lose contact with the floor until the foot contacts the pedal. Do not raise the toe of the foot higher than the top of the accelerator pedal. If the foot does not contact the pedal, proceed to the next step. If pedal contact does occur, place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward. (S16.3.2.2.3)
- \_\_29.4 Angle the foot to achieve contact between the foot and the pedal. If the foot does not contact the pedal, return the foot to the perpendicular orientation. If pedal contact does occur, place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward. (S16.3.2.2.3)
- \_\_29.5 Align the centerline of the foot with the vertical-longitudinal plane passing through the center of the accelerator pedal. Place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward. (S16.3.2.2.3)

#### X 29.6 Record foot position

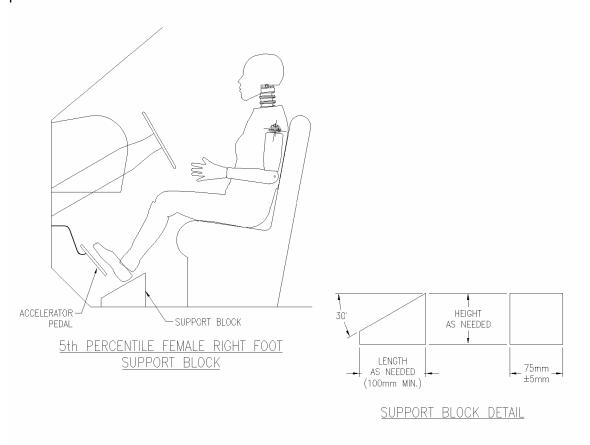


FIGURE G1

30. Perform the following steps until either all steps are completed, or the foot contacts the accelerator pedal. Step 30.5 shall be completed in all cases.	!
30.1 Extend the leg until the foot contacts the pedal. Do not raise the toe of the foot higher than the top of the accelerator pedal. If the foot does not contact the pedal, proceed to the next step. If pedal contact does occur, place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward. (S16.3.2.2.1(b) & S16.3.2.2.3)	)
30.2 If the vehicle has an adjustable accelerator pedal, move the pedals rearward until pedal contact occurs or the pedals reach the full rearward position. If pedal contact does occuplace a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward. (S16.3.2.2.1(b) & S16.3.2.2.3) N/A No pedal adjustment	ur
30.3 Angle the foot to achieve contact between the foot and the pedal. If the foot does not contact the pedal, return the foot to the perpendicular orientation. If pedal contact does occur, place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward. (S16.3.2.2.2 & S16.3.2.2.3)	S
30.4 Align the centerline of the foot in the same horizontal plane as the centerline of the accelerator pedal. Place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward. (S16.3.2.2.3) 30.5 Record foot position	
Pedal Contact achieved. Contact occurred at step	
Heel set mm from floor pan. Pedal Contact not achieved. Heel set mm from the floor pan.	
X 31. Driver's foot positioning, left foot.	
X 31.1 Place the foot perpendicular to the leg and determine if the heel contacts the floor pan any leg position. If the heel contacts the floor pan proceed to step 31.2, otherwise position the leg as perpendicular to the thigh as possible with the foot parallel to the flo pan. (S16.2.2.6)	
X 31.2 Place the foot on the toe board with the heel resting on the floor pan as close to the intersection of the floor pan and the toe board as possible. Adjust the angle of the foot necessary to contact the toe board. If the foot will not contact the toe board, set the for perpendicular to the leg, and set the heel on the floor pan as far forward as possible. Avoid contact with the brake pedal, clutch pedal, wheel well projection, and footrest. To avoid this contact use the following three manipulations in the order listed, with each subsequent option incorporating the previous, until contact is avoided: rotate the foot about the lower leg (abduction/adduction), plantar flex the foot, rotate the leg outboard about the hip. Movement should be the minimum amount necessary. If it is not possible to avoid all foot contact, give priority to avoiding brake or clutch pedal contact. (S16.2.2.4 & S16.2.2.5 & S16.2.2.7) X No contact	ot
Foot rotated about the leg (abduction/adduction)Foot rotated about the leg, and foot plantar flexedFoot rotated about the leg, foot plantar flexed, and the leg rotated about the hip.	

X 31.3 Record foot position. Heel does not contact floor pan. Heel on floor pan and foot on toe board.  X Heel on floor pan and foot not on toe board.
X 32. Driver arm/hand positioning.
X 32.1 Place the dummy's upper arms adjacent to the torso with the arm centerlines as close to a vertical longitudinal plane as possible. (S16.3.2.3.1)
X 32.2 Place the palms of the dummy in contact with the outer part of the steering wheel rim at its horizontal centerline with the thumbs over the steering wheel rim. (S16.3.2.3.2)
X 32.3 If it is not possible to position the thumbs inside the steering wheel rim at its horizontal centerline, then position them above and as close to the horizontal centerline of the steering wheel rim as possible. (S16.3.2.3.3)
X 32.4 Lightly tape the hands to the steering wheel rim so that if the hand of the test dummy is pushed upward by a force of not less than 9 N (2 lb) and not more than 22 N (5 lb), the tape releases the hand from the steering wheel rim. S16.3.2.3.4
X 33. Adjustable head restraintsN/A, there is no head restraint adjustment
33.1 If the head restraint has an automatic adjustment, leave it where the system positions the restraint after the dummy is placed in the seat. (S16.3.4.1) Go to 34.
33.2 Adjust each head restraint vertically so that the mid-horizontal plane determined in Data Sheet 14.1 is aligned with the center of gravity (CG) of the dummy head. (S16.3.4.3)
<ul> <li>X 33.3 If the above position is not attainable, move the vertical center of the head restraint to the closest detent below the center of the head CG. (S16.3.4.3)</li> <li>N/A midpoint position attained in previous step</li> <li>X Headrest set at nearest detent below the head CG</li> </ul>
33.4 If the head restraint has a fore and aft adjustment, place the restraint in the foremost position or until contact with the head is made, whichever occurs first. (S16.3.4.4)
34. Driver and passenger manual belt adjustment (for tests conducted with a belted dummy). (S16.3.5) <u>UNBELTED TEST</u>
34.1 If an adjustable seat belt D-ring anchorage exists, place it in the manufacturer's design position for a 5th percentile adult female. (S16.3.5.1) <b>This information will be supplied by the COTR.</b> Manufacturer's specified position
34.2 Place the Type 2 manual belt around the test dummy and fasten the latch. (S16.3.5.2)
34.3 Ensure that the dummy's head remains as level as possible. (S16.3.5.3)

34.4 Remove all slack from the lap belt. Pull the upper tors	so webbing out of the retractor and
allow it to retract; repeat this operation four times. Ap	ply a 9 N (2 lbf) to 18 N (4 lbf)
tension load to the lap belt. If the belt system is equip	pped with a tension-relieving
device, introduce the maximum amount of slack into the	he upper torso belt that is
recommended by the manufacturer. If the belt system	n is not equipped with a tension-
relieving device, allow the excess webbing in the should	ulder belt to be retracted by the
retractive force of the retractor. (S16.3.5.4)	•

## REMARKS:

I certify that I have read and performed each instruction.

Signature: Date: 7/1/08

#### APPENDIX G

#### DUMMY POSITIONING PROCEDURES FOR 5<sup>th</sup>% PASSENGER TEST DUMMY CONFORMING TO SUBPART 0 OF PART 572

Test Vehicle:	2008 Toyota Scion XB	NHTSA No.:	C85100
Test Program:	FMVSS 208 Compliance	Test Date:	7/1/08

Test Tecl	hnician:	Jord	an ⊦	<u>laynes</u>

IMPACT ANGLE:	Zero Degrees			
BELTED DUMMIES (YES/NO):	No			
TEST SPEED:	X 32 to 40 kmph	0 to 4	8 kmph	0 to 56 kmph
DRIVER DUMMY:	X 5 <sup>th</sup> female			_ 50 <sup>th</sup> male
PASSENGER DUMMY:	X 5 <sup>th</sup> female			_ 50 <sup>th</sup> male

(Check this item ONLY if it applies to this vehicle.)

\_\_The passenger seat adjustments are controlled by the adjustments made to the driver's seat. Therefore, positioning of the passenger dummy is made simultaneously with the driver dummy. Adjustments made to the seat to position the driver will over ride any adjustments that would normally be made to position the passenger. (S16.2.10.3)

- X 1. Place the SCRP in the full rearward, mid-height position, and mid-seat cushion angle, determined during the completion of Data Sheet 14.1. (S16.3.3.1.1)
- X2. Fully recline the seat back. (S16.3.3.1.2)
  N/A seat back not adjustable.
- X3. Place the dummy in the seat with the legs at an angle of 120 degrees to the thighs. The calves should not be touching the seat cushion. (S16.3.3.1.2)
- X4. Position the dummy in the seat such that the midsagittal plane is coincident with the longitudinal seat cushion marking that was determined in Data Sheet 14.1. (S16.3.3.1.3 and S16.3.3.1.4)
- X 5. Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic angle. (S16.3.3.1.5)
- X 6. Set the angle between the legs and the thighs to 120 degrees. (S16.3.3.1.6)
- X 8. Push rearward on the dummy's knees until the pelvis contacts the seat back, or the backs of the calves contact the seat cushion, whichever occurs first. (S16.3.3.1.6)
   Pelvis contacted seat back.
   X Calves contacted seat cushion.
- $\underline{X}$  9. Gently rock the upper torso  $\pm$  5 degrees (approximately 51 mm (2 inches)) side-to-side three times. (S16.3.3.1.7)

<u>X</u> 10.	If needed, extend the legs until the feet do not contact the floor pan. The thighs should be resting on the seat cushion. (S16.3.3.1.8)
<u>X</u> 11.	Use seat controls to line up the seat markings determined during the completion of Data Sheet 14.1 to set the foremost fore-aft position, mid-height position and the seat cushion mid-angle. If the dummy contacts the interior move the seat rearward until a maximum clearance of 5 mm (0.2 inches) is achieved or the seat is in the closest detent position that does not cause dummy contact. (S16.3.3.1.8)  X_Foremost, mid-height position and the seat cushion mid-angle reached Dummy contact. Clearance set at maximum of 5mm
<u>X</u> 12.	If the seat back is adjustable, rotate the seat back forward while holding the thighs in place. Continue rotating the seat back forward until the transverse instrument platform of the dummy head is level ± 0.5 degrees. If head cannot be leveled using the seat back adjustment, or the seat back is not adjustable, use the lower neck bracket adjustment to level the head. If a level position cannot be achieved, adjust the head as closely as possible to the ± 0.5 degree range. (S16.3.3.1.9 and S16.3.3.1.10) (Check All That Apply) Seat back not adjustableSeat back not independent of driver side seat back X_Head Level Achieved. (Check all that apply) Head leveled using the adjustable seat backHead Angle
<u>X</u> 13.	Verify the pelvis is not interfering with the seat bight. (S16.3.3.1.9)  X No interference Pelvis moved forward the minimum amount so that it is not caught in the seat bight.
<u>X</u> 14.	Verify the dummy abdomen is properly installed. (S16.3.3.1.9)  X_Abdomen still seated properly into dummy Abdomen was adjusted because it was not seated properly into dummy
<u>X</u> 15.	Head Angle $\underline{X}$ N/A, neither the pelvis nor the abdomen were adjusted.
<u>X</u> 15.1	1 Head still level (Go to 16)

15.2	Head level adjusted
	Head Level Achieved. (Check all that apply)Head leveled using the adjustable seat back
	Head leveled using the neck bracket.  Head Angle degrees
	Head Level NOT Achieved. (Check all that apply)
	Head adjusted using the adjustable seat back
	Head adjusted using the neck bracket.
	Head Angle degrees
<u>X</u> 16.	Measure and set the pelvic angle using the pelvic angle gage TE-2504. The pelvic angle should be 20.0 degrees $\pm$ 2.5 degrees. If the pelvic angle cannot be set to the specified range because the head will not be level or because the dummy will have need major repositioning, adjust the pelvis as closely as possible to the angle range, but keep the head level. $\underline{X}$ Pelvic angle set to 20.0 degrees $\pm$ 2.5 degrees. $\underline{P}$ Pelvic angle of 20.0 degrees not achieved, the angular difference was minimized. $\underline{X}$ Record the pelvic angle. $\underline{P}$ 21.0 degrees
<u>X</u> 17.	Check the dummy for contact with the interior after completing adjustments. X No contact.
	Dummy in contact with interior.
	Seat moved aft mm from the previous positionSeat moved aft detent positions from the previous position.
	Seat moved an detent positions from the previous position.
<u>X</u> 18.	Verify the transverse instrument platform of the dummy head is level +/- 0.5 degrees. Use the lower neck bracket adjustment to level the head. If a level position cannot be achieved, minimize the angle. (S16.3.3.1.9, S16.3.3.1.10, and S16.3.3.1.11) X Head Level Achieved
	Head Angle <u>0.0</u> degrees
	Head Level NOT Achieved.  Head Angle degrees
<u>X</u> 19.	Check the dummy to see if additional interior clearance is obtained, allowing the seat to be moved forward. (S16.3.3.1.12) N/A Bench Seat
	$\overline{\underline{X}}$ N/A Seat already at full forward position.
	Clearance unchanged. No adjustments required.  Additional clearance available
	Seat moved Forward mm from the previous position.
	Seat moved Forward detent positions from the previous position.
	Seat moved Forward, Full Forward position reached.
<u>X</u> 20.	Passenger foot positioning. (Indicate final position achieved) (S16.3.3.2)
20.1	Place feet flat on the toe board; OR (S16.3.3.2.1)
<u>X</u> 20.2	If the feet cannot be placed flat on the toe board, set the feet perpendicular to the lower leg, and rest the heel as far forward on the floor pan as possible; OR (S16.3.3.2.2)
20.3	If the heels do not touch the floor pan, set the legs as perpendicular to the thighs as possible and set the feet parallel to the floor pan. (S16.3.3.2.2)
X 21	Passenger arm/hand positioning (S16.3.3.3)

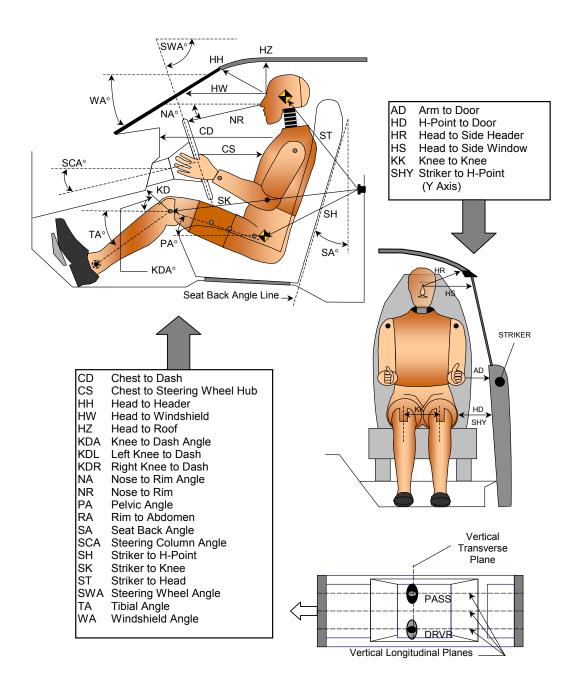
	Place the dummy's upper arms adjacent to the torso with the arm centerlines as close to a vertical longitudinal plane as possible. (S16.3.3.3.1)
<u>X</u> 21.2	Place the palms of the dummy in contact with the outer part of the thighs (S16.3.3.3.2)
<u>X</u> 21.3	Place the little fingers in contact with the seat cushion. (S16.3.3.3.3)
<u>X</u> 22.	Adjustable head restraints (S16.3.4)N/A, there is no head restraint adjustment
	If the head restraint has an automatic adjustment, leave it where the system positions the restraint after the dummy is placed in the seat. (S16.3.4.1) Go to 23.
	Adjust each head restraint vertically so that the horizontal plane determined in Data Sheet 14.1 is aligned with the center of gravity (CG) of the dummy head. (S16.3.4.3)
	If the above position is not attainable, move the vertical center of the head restraint to the closest detent below the center of the head CG. (S16.3.4.3) N/A midpoint position attained in previous step  X_Headrest set at nearest detent below the head CG
	If the head restraint has a fore and aft adjustment, place the restraint in the foremost position or until contact with the head is made, whichever occurs first. (S16.3.4.4)
	Manual belt adjustment (for tests conducted with a belted dummy) S16.3.5 XN/A, Unbelted test
_	If an adjustable seat belt D-ring anchorage exists, place it in the manufacturer's design position for a 5th percentile adult female. (S16.3.5.1) <b>This information will be supplied by the COTR.</b> Manufacturer's specified position  Actual Position
23.2	Place the Type 2 manual belt around the test dummy and fasten the latch. (S16.3.5.2)
23.3	Ensure that the dummy's head remains as level as possible. (S16.3.5.3)
1	Remove all slack from the lap belt. Pull the upper torso webbing out of the retractor and allow it to retract; repeat this operation four times. Apply a 9 N (2 lbf) to 18 N (4 lbf) tension load to the lap belt. If the belt system is equipped with a tension-relieving device, introduce the maximum amount of slack into the upper torso belt that is recommended by the manufacturer. If the belt system is not equipped with a tension-relieving device, allow the excess webbing in the shoulder belt to be retracted by the retractive force of the retractor. (S16.3.5.4)
REMAR	RKS:
I certify	that I have read and performed each instruction.
Signatı	ure: Jondan Haynes Date: 7/1/08

#### **DUMMY MEASUREMENTS**

Test Vehicle: 2008 Toyota Scion XB NHTSA No.: C85100
Test Program: FMVSS 208 Compliance Test Date: 7/1/08

Test Technician: Joe Fleck

#### DUMMY MEASUREMENTS FOR FRONT SEAT OCCUPANTS



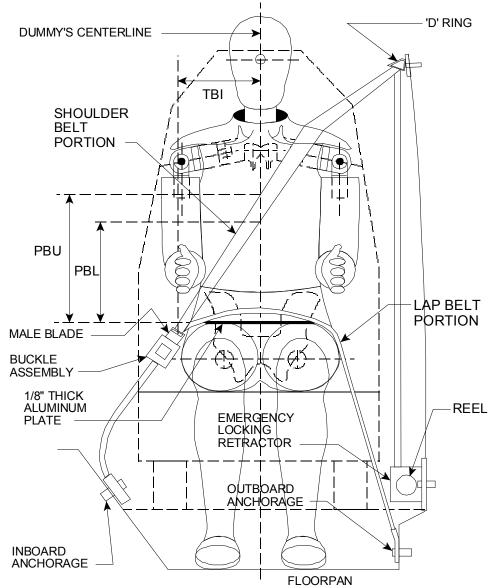
## **DATA SHEET 37 DUMMY MEASUREMENTS**

Test Vehicle: 2008 Toyota Scion XB NHTSA No.: <u>C85100</u> FMVSS 208 Compliance Jordan Haynes Test Program: Test Technician: Test Date: 7/1/08

#### **TEST DUMMY POSITION MEASUREMENTS**

Code	Measurement Description	Driver SI	N 516	Passenger SN 511	
		Length (mm)	Angle (°)	Length (mm)	Angle (°)
WA	Windshield Angle		39.0		
SWA	Steering Wheel Angle		61.5		
SCA	Steering Column Angle		28.4		
SA	Seat Back Angle (On Head Rest Post)		0.1		0.0
HZ	Head to Roof (Z)	319		303	
НН	Head to Header	506	29.1	490	26.2
HW	Head to Windshield	753	0.0	755	0.0
HR	Head to Side Header (Y)	345		316	
NR	Nose to Rim	296	8.5		
CD	Chest to Dash	608		412	
CS	Chest to Steering Hub	229	13.7		
RA	Rim to Abdomen	107	0.0		
KDL	Left Knee to Dash	73	34.7	69	
KDR	Right Knee to Dash	64		68	23.1
PA	Pelvic Angle		21.0		21.0
TA	Tibia Angle		55.8		61.8
KK	Knee to Knee (Y)	285		220	
SK	Striker to Knee	711	103.8	728	104.5
ST	Striker to Head	224	34.4	226	38.3
SH	Striker to H-Point	404	122.2	395	122.1
SHY	Striker to H-Point (Y)	305		302	
HS	Head to Side Window	404		385	
HD	H-Point to Door (Y)	177		180	
AD	Arm to Door (Y)	181		174	
AA	Ankle to Ankle	296		170	

## **SEAT BELT POSITIONING DATA**



#### FRONT VIEW OF DUMMY

#### **SEAT BELT POSITIONING MEASUREMENTS**

Measurement Description	Units	Driver	Passenger
PBU - Top surface of reference to belt upper edge	mm	N/A	N/A
PBL - Top surface of reference to belt lower edge	mm	N/A	N/A

## **DATA SHEET 38 CRASH TEST**

NHTSA No.: Test Vehicle: 2008 Toyota Scion XB C85100 FMVSS 208 Compliance Test Date: 7/1/08 Test Program:

Jordan Havnes Test Technician:

1.

Χ

X

X

X

X

IMPACT ANGLE:	Zero Degrees			
BELTED DUMMIES (YES/NO):	No			
TEST SPEED:	_X_ 32 to 40 kmph	0 to 4	8 kmph	0 to 56 kmph
DRIVER DUMMY:	X 5 <sup>th</sup> female			_ 50 <sup>th</sup> male
PASSENGER DUMMY:	X 5 <sup>th</sup> female			50 <sup>th</sup> male

BELTED DUMMIES (YES/NO):	No		
TEST SPEED:	X 32 to 40 kmph	0 to 48 kmph	0 to 56 kmph
DRIVER DUMMY:	X 5 <sup>th</sup> female	_	_ 50 <sup>th</sup> male
PASSENGER DUMMY:	X 5 <sup>th</sup> female	_	_ 50 <sup>th</sup> male

Χ	2.	The speed measuring devices are in place and functioning.
X	3.	The speed measuring devices are 1.0 m from the barrier (spec. 1.5m) and 30 cm from
	-	the barrier (spec is 30 cm)

4. Convertible top is in the closed position.

Vehicle underbody painted

N/A, not a convertible

5. Instrumentation and wires are placed so the motion of the dummies during impact is not affected.

6. Tires inflated to pressure on tire placard or if it does not have a tire placard because it is not a passenger car, then inflated to the tire pressure specified in the owner information.

240 kpa specified on tire placard or in owner information 240 kpa front left tire 240 kpa front right tire 240 kpa specified on tire placard or in owner information 220 kpa rear left tire 220 kpa specified on tire placard or in owner information 220 kpa specified on tire placard or in owner information 220 kpa rear right tire

- 7. Time zero contacts on barrier in place.
- 8. Pre test zero and shunt calibration adjustments performed and recorded
- Dummy temperature meets requirements of section 12.2 of the test procedure. 9.
- 10. Vehicle hood closed and latched
- 11. Transmission placed in neutral X
- 12. Parking brake off Χ 13. Ignition in the ON position Χ
- 14. Doors closed and latched but not locked Χ
- 15. Posttest zero and shunt calibration checks performed and recorded Χ
  - 16. Actual test speed 39.9 kmph
  - 17. Vehicle rebound from the barrier 541 cm
  - 18. Describe whether the doors open after the test and what method is used to open the doors.
    - Left Front Door: Door remained closed and latched; Door opened without tools
    - Right Front Door: Door remained closed and latched; Door opened without tools
    - Left Rear Door: Door remained closed and latched; Door opened without tools
    - Right Rear Door: Door remained closed and latched; Door opened without tools

X Driver Dummy Knee Air Bag	act points of the dummy with the interior of the vehicle. y: Head to Air Bag, Visor, and Headrest; Chest to Air Bag; Knees to ummy: Head to Air Bag and Door Panel; Chest to Air Bag; Knees to
REMARKS:	
I certify that I have read and	performed each instruction.

## **DATA SHEET NO. 40**

#### **ACCIDENT INVESTIGATION MEASUREMENTS**

2008 Toyota Scion XB Test Vehicle: NHTSA No.: <u>C85100</u> Test Program: Test Technician: FMVSS 208 Compliance Test Date: 7/1/08

Jamie Aide

Velocity Change:

IMPACT ANGLE:	Zero Degrees				
BELTED DUMMIES (YES/NO):	No				
TEST SPEED:	X 32 to 40 kmph 0 to 48 kmph 0 to 56 km			0 to 56 kmph	
DRIVER DUMMY:	X 5 <sup>th</sup> female	X 5 <sup>th</sup> female 50 <sup>th</sup> male		_ 50 <sup>th</sup> male	
PASSENGER DUMMY:	X 5 <sup>th</sup> female 50		_ 50 <sup>th</sup> male		

Vehicle Year/Make/Model/Body Style:	2008 Toyota Scion XB XBMPV
VIN:	JTLKE50E381050064
Wheelbase:	2605 mm
Build Date:	11/07
Vehicle Size Category:	3
Test Weight:	1514.7 kg
Front Overhang:	875 mm
Overall Width:	1728 mm
Overall Length Center:	3248 mm

Accelerometer Data					
Acceleron	neter Data				
Location:	As per measurements on Data Sheet 33				
Linearity:	>99.9%				
Integration Algorithm:	Trapezoidal				
Vehicle Impact Speed:	39.9 kmph				
Time of Separation:	79.8 ms				

46.3 kmph

#### **CRUSH PROFILE**

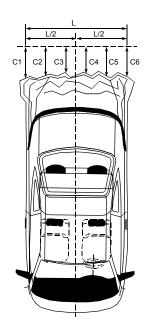
Collision Deformation Classification: 12FDEW6

Midpoint of Damage: Vehicle Longitudinal Centerline

Damage Region Length (mm): 1365

Impact Mode: Frontal Barrier

No.	Measurement Description	Units	Pre-Test	Post-Test	Difference
C1	Crush zone 1 at left side	mm	4106	3981	125
C2	Crush zone 2 at left side	mm	4204	4022	182
C3	Crush zone 3 at left side	mm	4238	4039	199
C4	Crush zone 4 at right side	mm	4236	4026	210
C5	Crush zone 5 at right side	mm	4205	4006	199
C6	Crush zone 6 at right side	mm	4112	3972	140



#### **REMARKS**:

I certify that I have read and performed each instruction.

## **WINDSHIELD MOUNTING (FMVSS 212)**

2008 Toyota Scion XB FMVSS 208 Compliance Jordan Haynes Test Vehicle: NHTSA No.: <u>C85100</u> Test Program: Test Technician: Test Date: 7/1/08

No, Pass

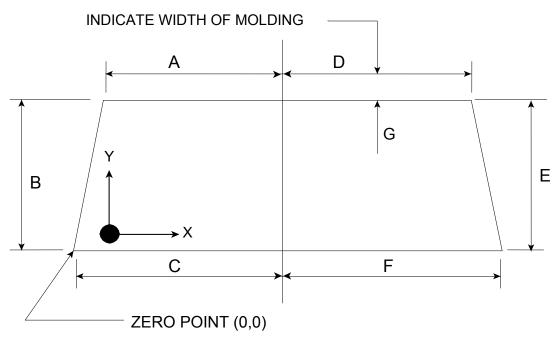
IMPAC	T ANG	l F·	Zero Degrees				
		MIES (YES/NO):	No				
TEST SPEED:			X 32 to 40 kmph	0 to 4	18 kmph 0 to 56 kmph		
DRIVE			X 5 <sup>th</sup> female		50 <sup>th</sup> male		
PASSE	NGER	DUMMY:	X 5 <sup>th</sup> female		50 <sup>th</sup> male		
X	1. 1.1	Pre-Crash Describe from visua material. Retained with glue	scribe from visual inspection how the windshield is mounted and describe any trim terial.				
		Plastic trim					
X	1.2	Mark the longitudina	al centerline of the windshield	b			
X	1.3	Measure pre-crash	A, B, and C for the left side a	and record	in the chart below.		
X	1.4	Measure pre-crash	C, D, and E for the right side	and recor	d in the chart below.		
X	1.5	Measure from the edge of the retainer or molding to the edge of the windshield. Dimension G (mm): 13 mm					
	2.	Post Crash					
X	2.1	Can a single thickness of copier type paper (as small a piece as necessary) slide between the windshield and the vehicle body?					
			in the post crash column, and		e it by repeating the pre-crash the retention percentage,		
	2.2	Visibly mark the be	ginning and end of the portion windshield and the vehicle be		eriphery where the paper		
	2.3	Measure and record	d post-crash A, B, C, D, E, ar arts of the windshield where	nd F such t	hat the measurements do not slides between the windshield		
	2.4	Calculate and recor	d the percent retention for th	e right and	left side of the windshield.		
	2.5	Is total right side pe	rcent retention less than 75%	<b>6?</b>			
		Yes, Fail					
		No, Pass					
	2.6	,	cent retention less than 75%	?			
		Yes, Fail					

#### **WINDSHIELD RETENTION MEASUREMENTS**

	Dimension	Pre-Crash (mm)	Post-Crash (mm)	Percent Retention (Post-Test ÷ Pre-Crash)
Left Side	Α	633	633	100%
	В	602	602	100%
	С	755	755	100%
	Total	1990	1990	100%
Right Side	D	633	633	100%
	Е	602	602	100%
	F	755	755	100%
	Total	1990	1990	100%

Indicate area of mounting failure. NONE

## FRONT VIEW OF WINDSHIELD



**REMARKS**:

I certify that I have read and performed each instruction.

Signature:	Jordan	Stynes	Date:	7/1/08
_	//	/		

# DATA SHEET 42 WINDSHIELD ZONE INTRUSION (FMVSS 219)

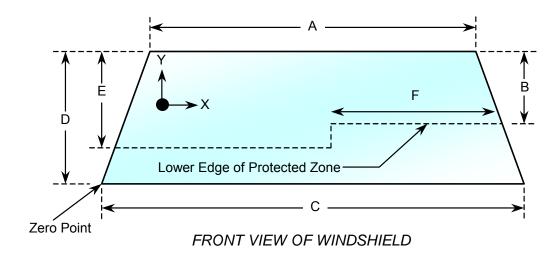
Test Vehicle: 2008 Toyota Scion XB NHTSA No.: C85100
Test Program: FMVSS 208 Compliance Test Date: 7/1/08

Test Technician: <u>Jamie Aide</u>

IMPACT ANGLE:	Zero Degrees				
BELTED DUMMIES (YES/NO):	No				
TEST SPEED:	X 32 to 40 kmph	0 to 48 kmph		0 to 56 kmph	
DRIVER DUMMY:	X 5 <sup>th</sup> female		50 <sup>th</sup> male		
PASSENGER DUMMY:	X 5 <sup>th</sup> female		50 <sup>th</sup> male		

- X 1. Place a 165 mm diameter rigid sphere, with a mass of 6.8 kg on the instrument panel so that it is simultaneously touching the instrument panel and the windshield. (571.219 S6.1(a))
- X 2. Roll the sphere from one side of the windshield to the other while marking on the windshield where the sphere contacts the windshield. (571.219 S6.1(b))
- X 3. From the outermost contactable points on the windshield draw a horizontal line to the edges of the windshield. (571.219 S6.1(b))
- X 4. Draw a line on the inner surface of the windshield that is 13 mm below the line determined in items 2 and 3
- X 5. After the crash test, record any points where a part of the exterior of the vehicle has marked, penetrated, or broken the windshield.

Provide all dimensions necessary to reproduce the protected area.



#### WINDSHIELD DIMENSIONS

Item	Units	Value
Α	mm	1266
В	mm	346
С	mm	1510
D	mm	602
Е	mm	416
F	mm	944

### AREA OF PROTECTED ZONE FAILURES:

B. Provide coordinates of the area that the protected zone was penetrated more than 0.25 inches by a vehicle component other than one which is normally in contact with the windshield.

X	Υ
NONE	

C. Provide coordinates of the area beneath the protected zone template that the inner surface of the windshield was penetrated by a vehicle component.

X	Υ
NONE	

### **REMARKS:**

I certify that I have read and performed each instruction.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_7/1/08

# DATA SHEET 43 FUEL SYSTEM INTEGRITY (FMVSS 301)

Test Vehicle:  $\underline{2008 \text{ Toyota Scion XB}}$  NHTSA No.:  $\underline{C85100}$  Test Program:  $\underline{FMVSS 208 \text{ Compliance}}$  Test Date:  $\underline{7/1/08}$ 

Test Technician: Tim Bratz

TYPE OF IMPACT:	25 mph Unbelted Flat Frontal

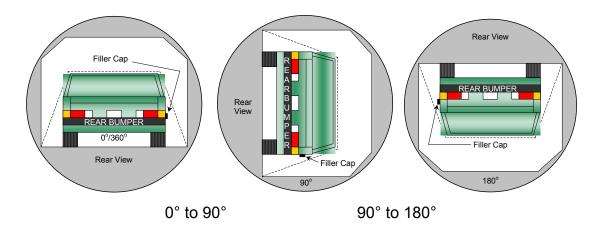
# **Stoddard Solvent Spillage Measurements**

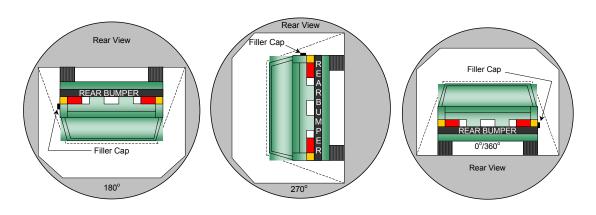
A.	From impact until vehicle	motion ceases:	0.0	_grams
	(Maximum Allowable = 28	3 grams)		
B.	For the 5 minute period a	fter motion ceases:	0.0	_grams
	(Maximum Allowable = 14	12 grams)		
C.	For the following 25 minu	tes:	0.0	_grams
	(Maximum Allowable = 28	3 grams/minute)		
D.	Spillage: NO	NE		

**REMARKS: NO SPILLAGE** 

# DATA SHEET NO. 43 FMVSS 301 STATIC ROLLOVER DATA

Test Vehicle: 2008 Toyota Scion XB NHTSA No.: C85100
Test Program: FMVSS 208 Compliance Test Date: 7/1/08





- 180° to 270° 270° to 360°
- 1. The specified fixture rollover rate for each 90° of rotation is 60 to 180 seconds.
- 2. The position hold time at each position is 300 seconds (minimum).
- 3. Details of Stoddard Solvent spillage locations: None

Test Phase	Rotation Time (sec.)	Hold Time (sec.)	Spillage (grams)
0° to 90°	115	300	0.0
90° to 180°	117	300	0.0
180° to 270°	117	300	0.0
270° to 360°	116	300	0.0

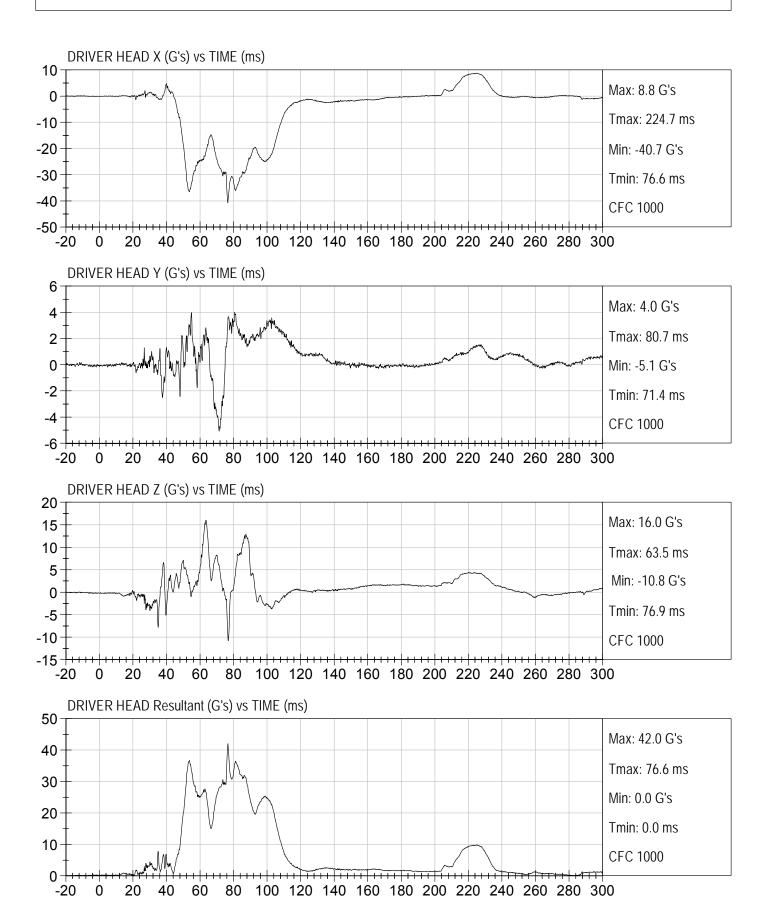
# APPENDIX A CRASH TEST DATA

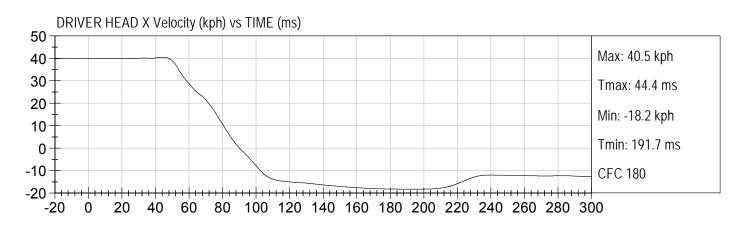
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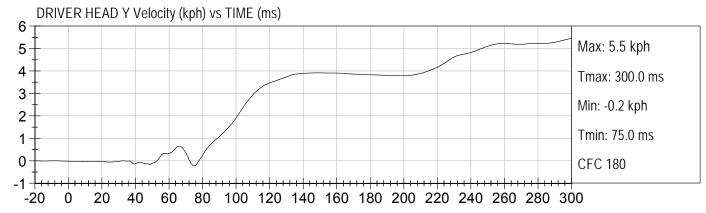
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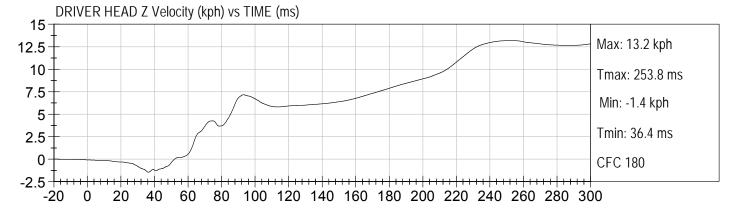
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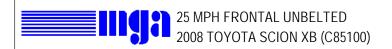
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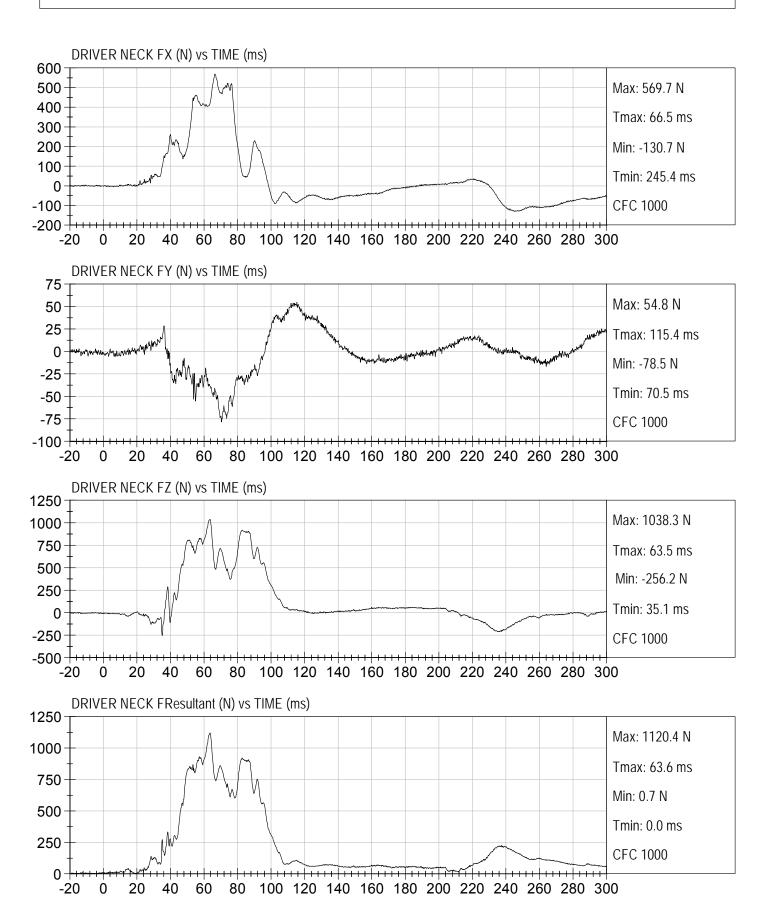


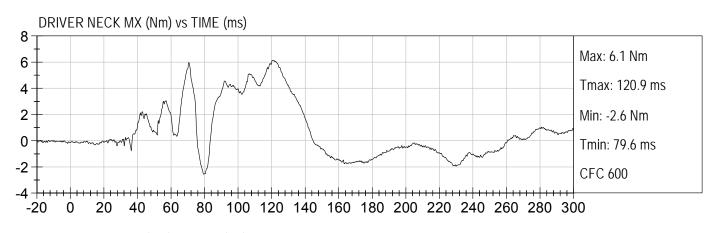


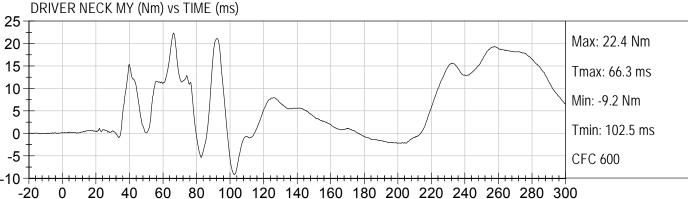


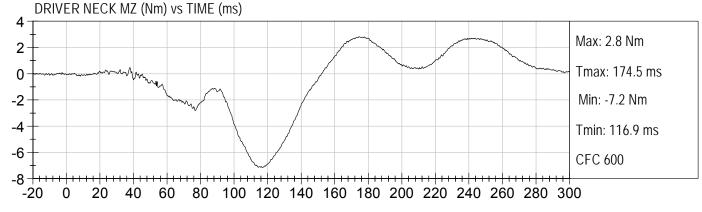


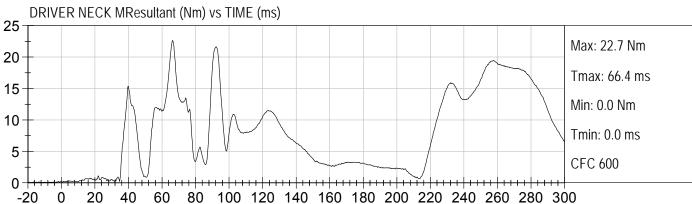


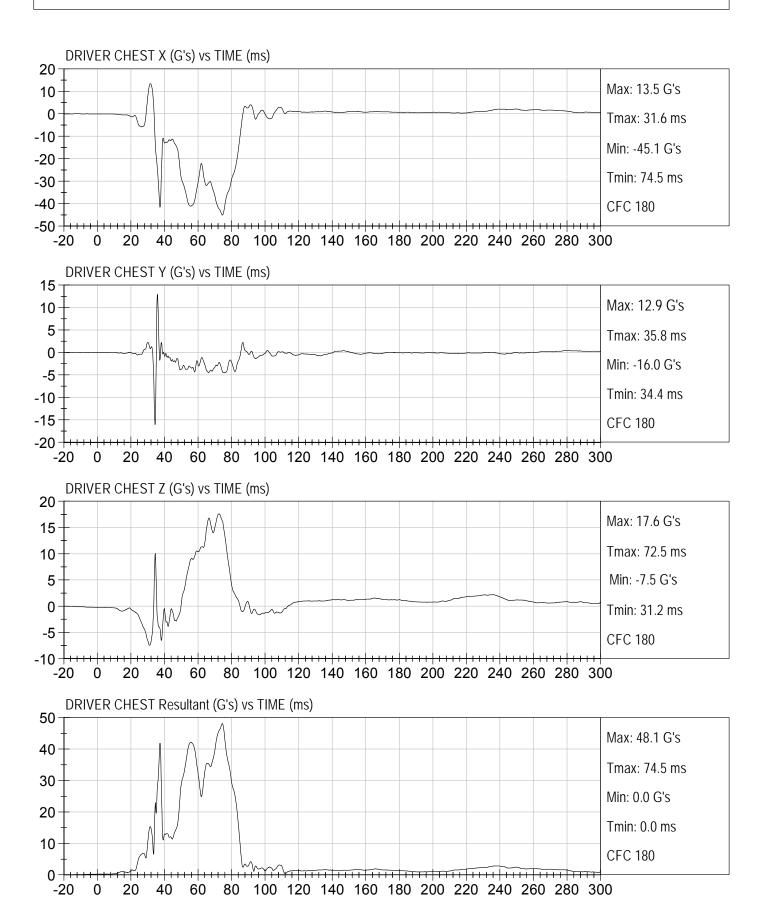


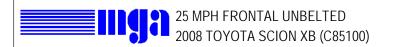


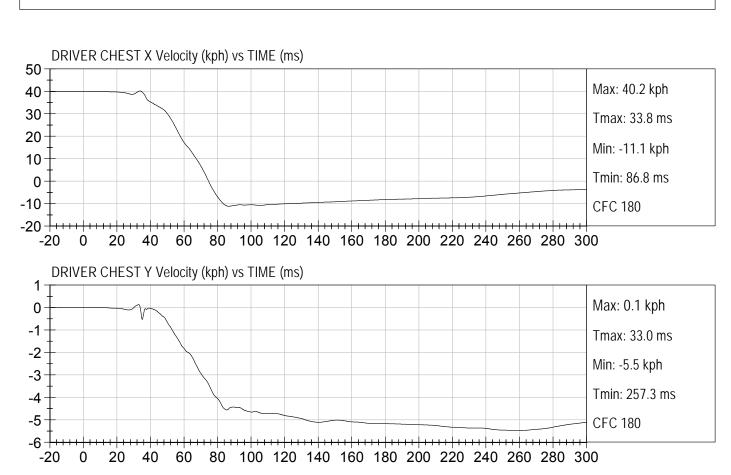


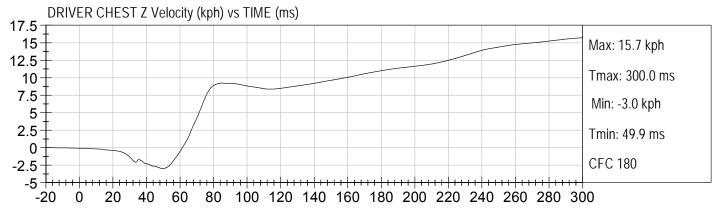


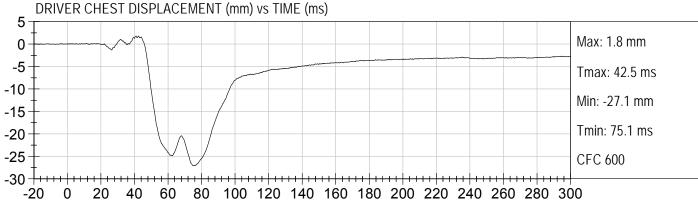


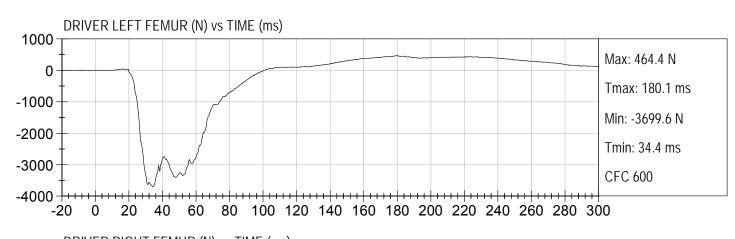


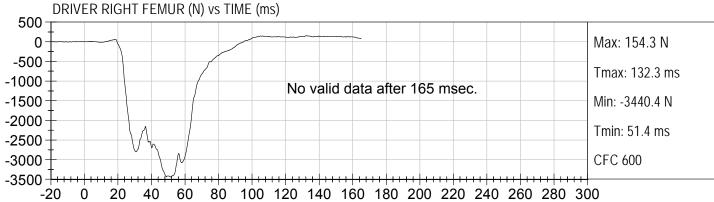


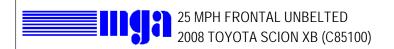


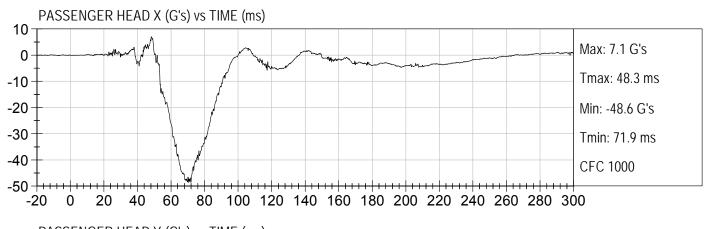


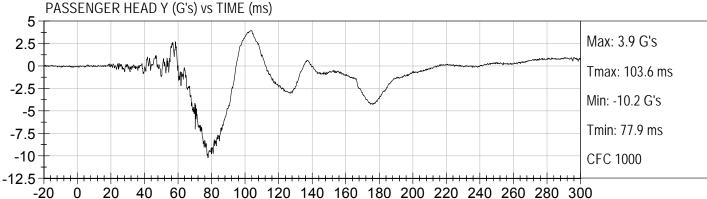


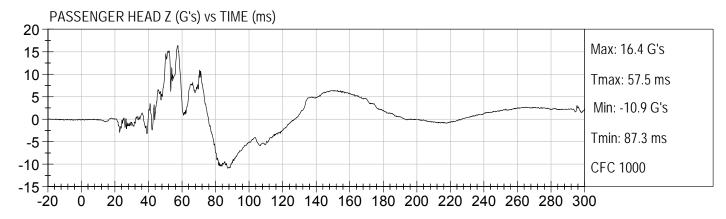


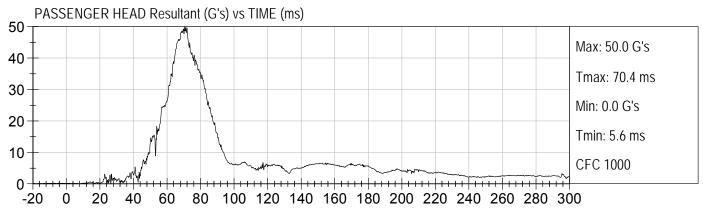


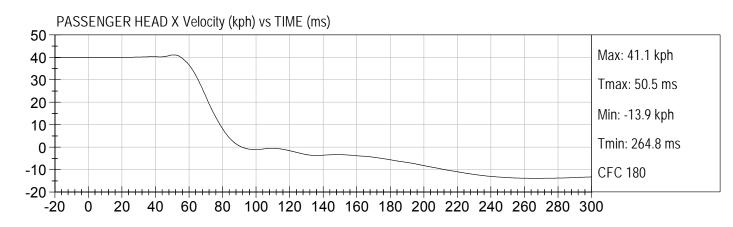


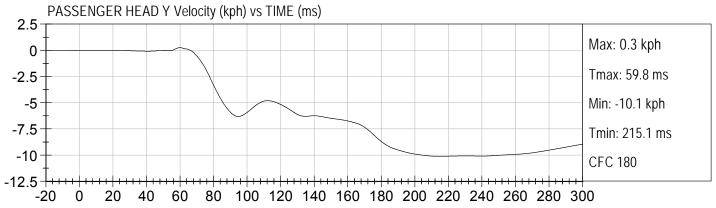


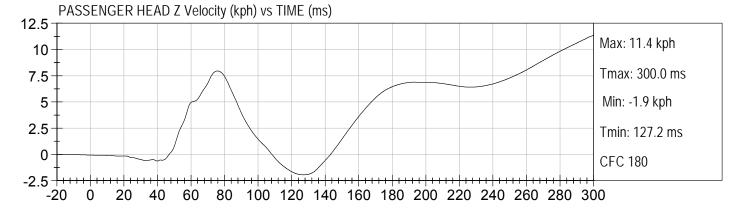


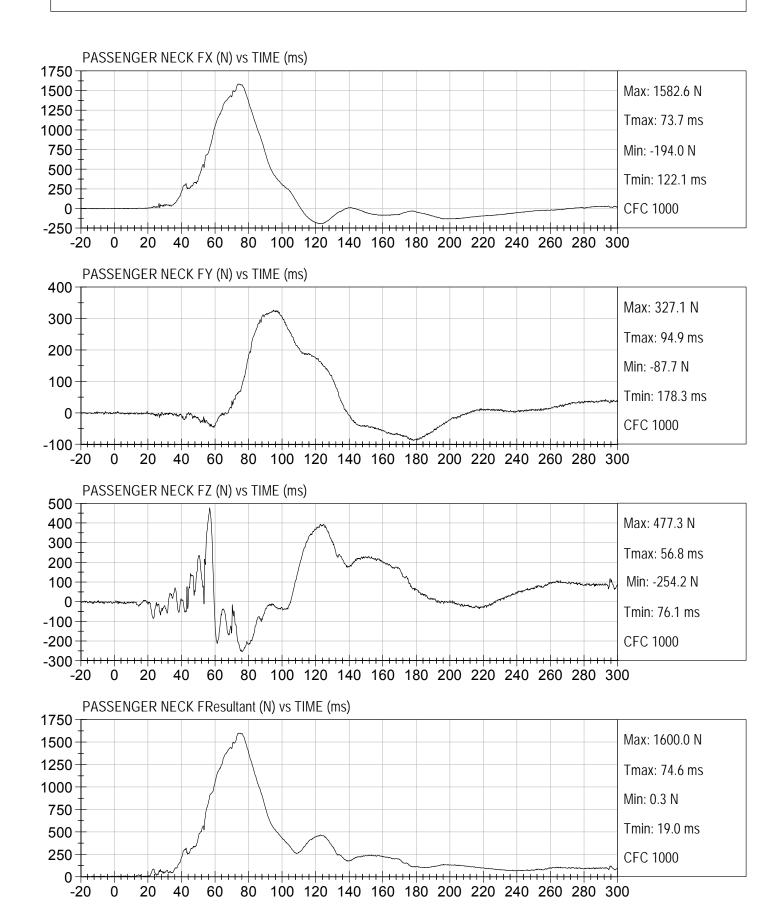


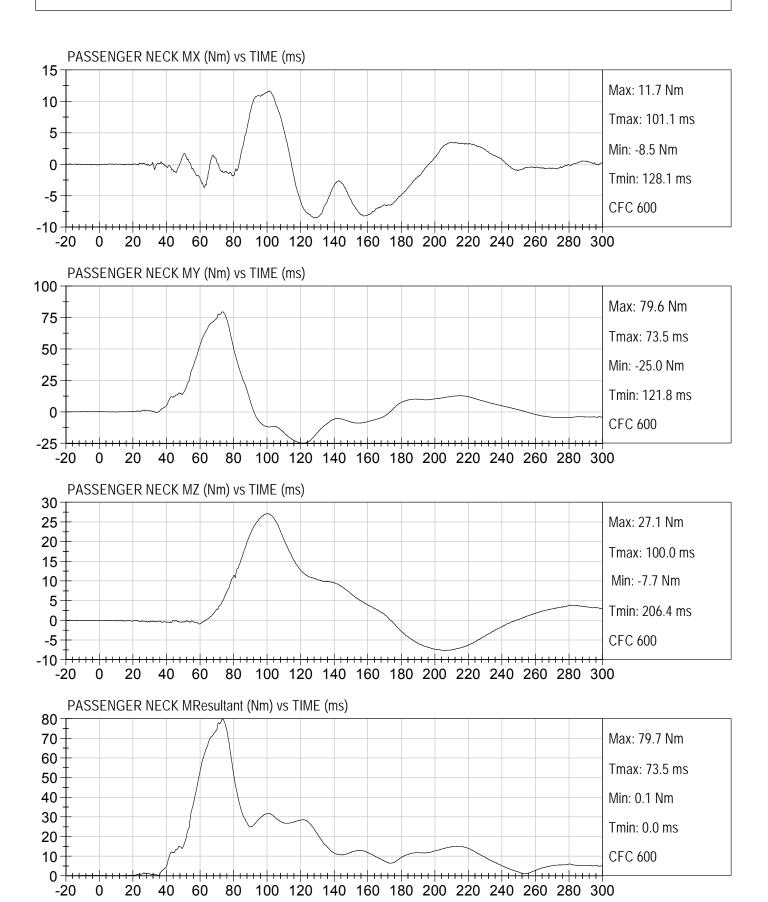


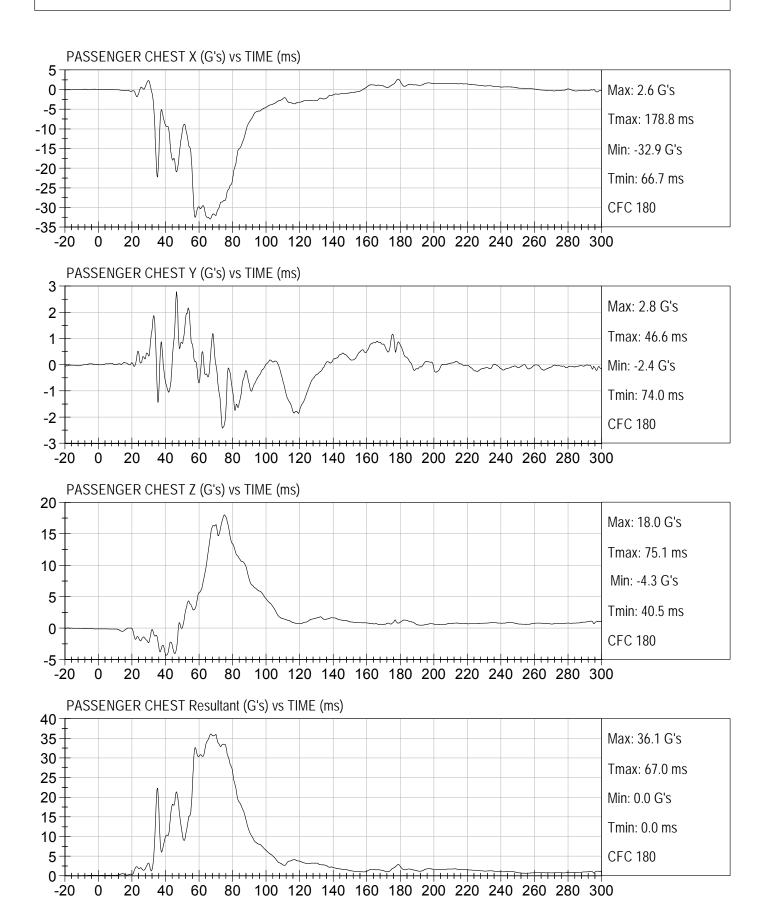


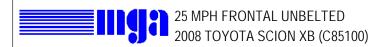


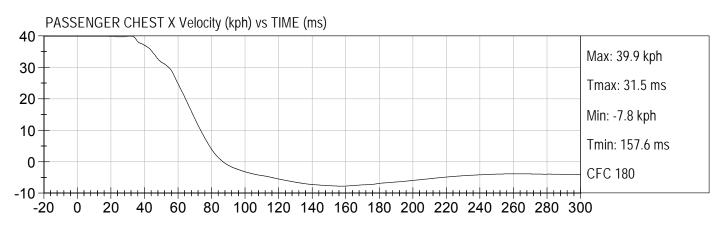


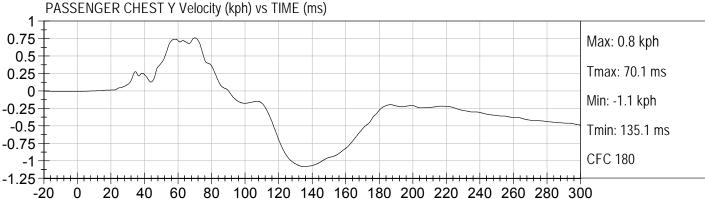


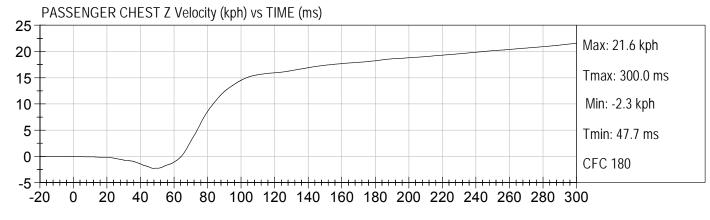


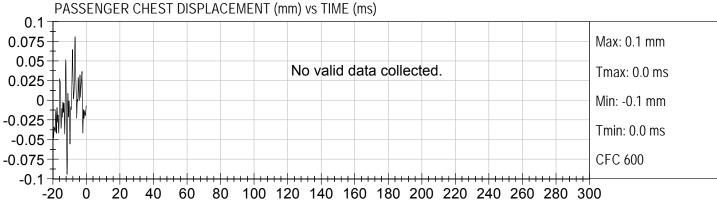


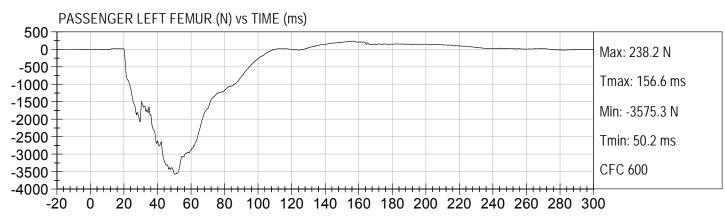


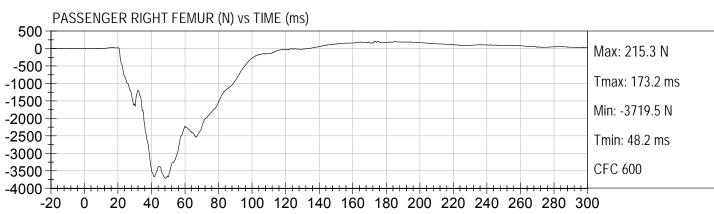


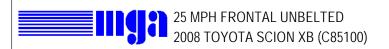


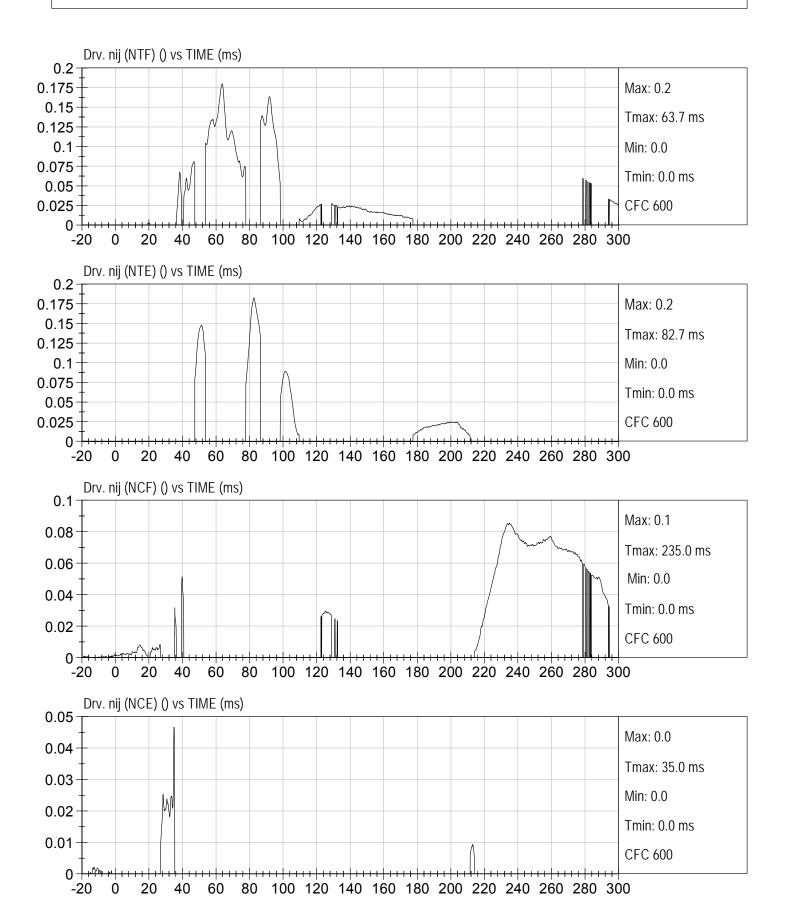


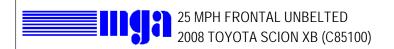


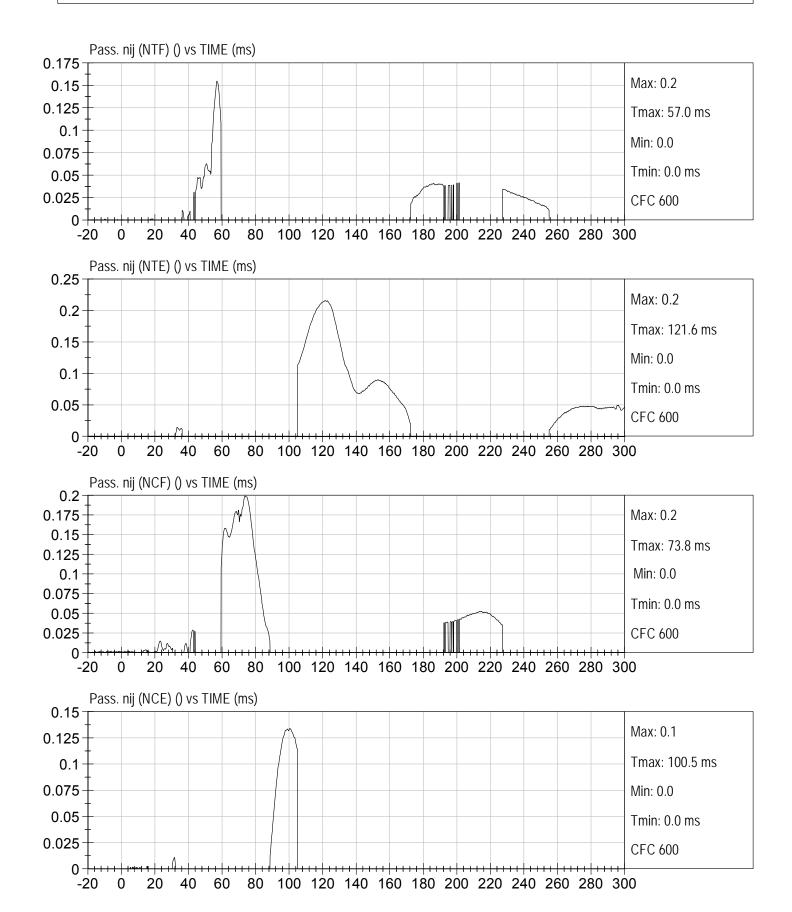


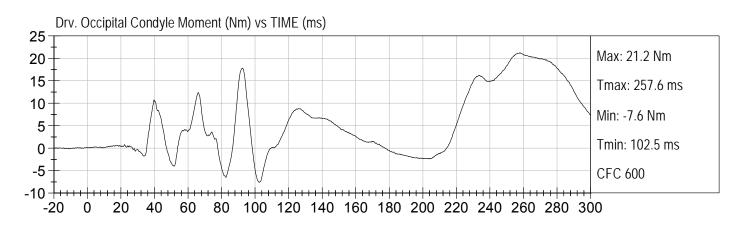


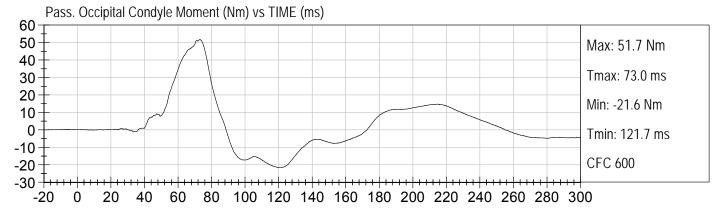


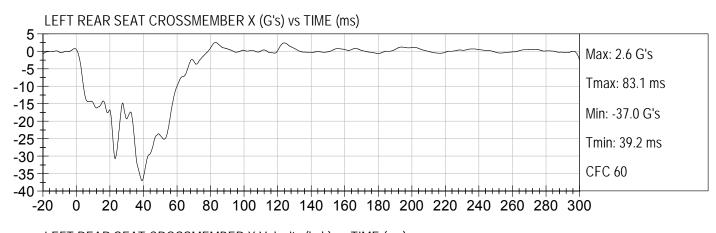


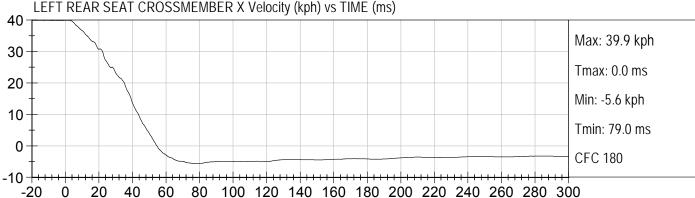


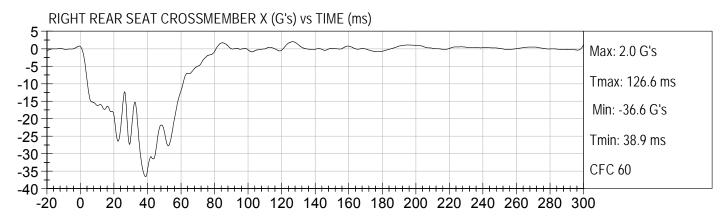


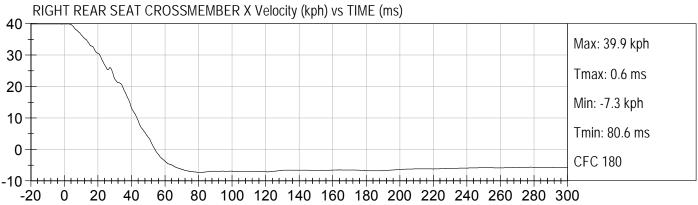


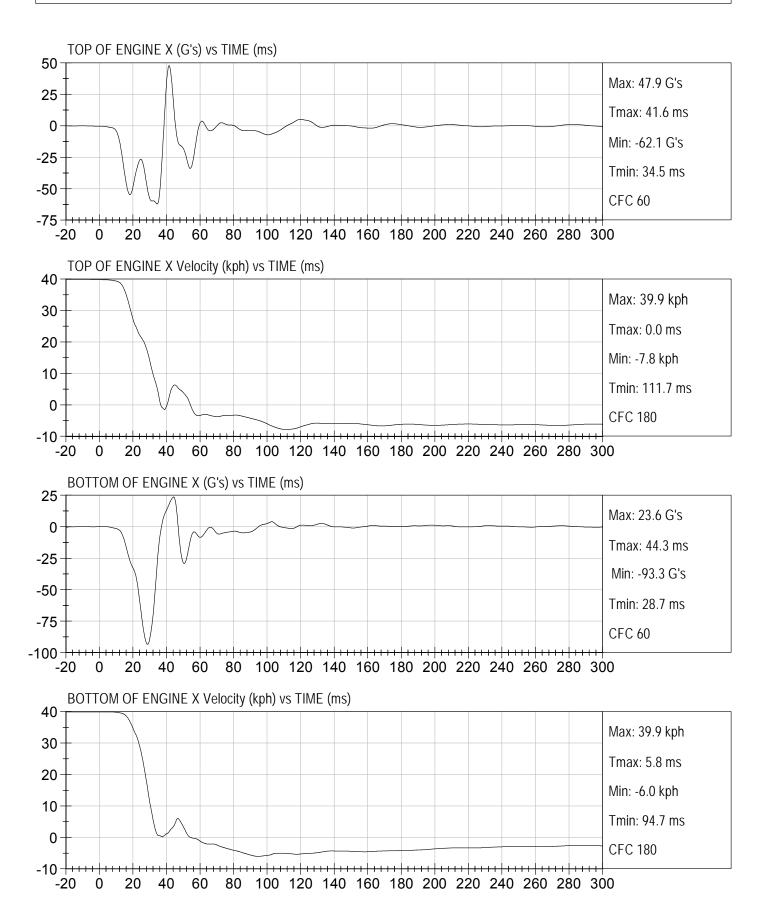


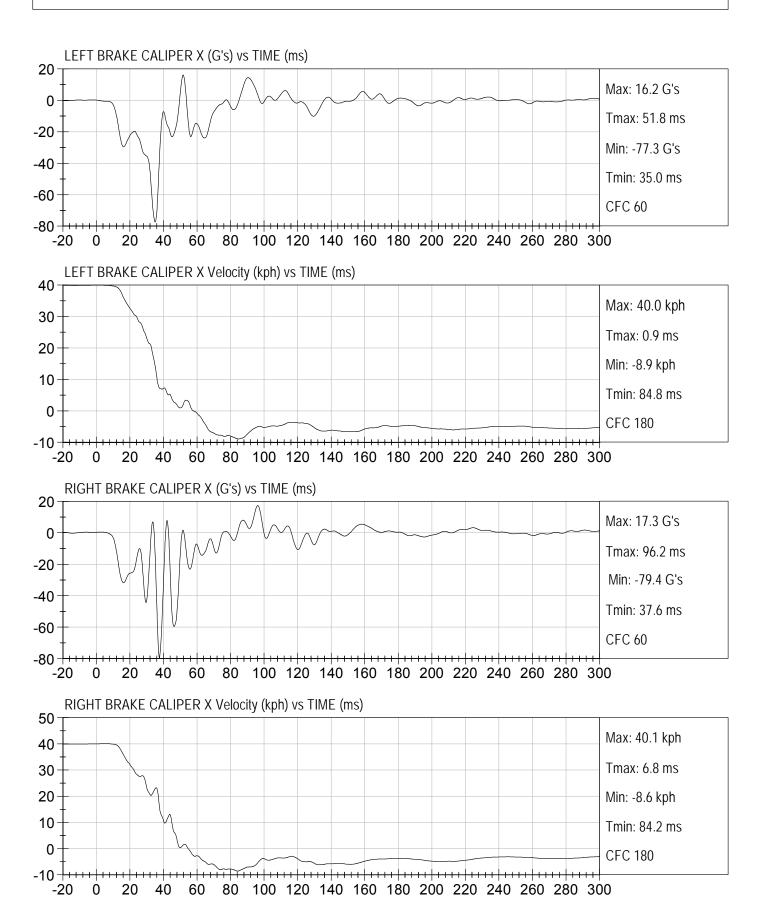


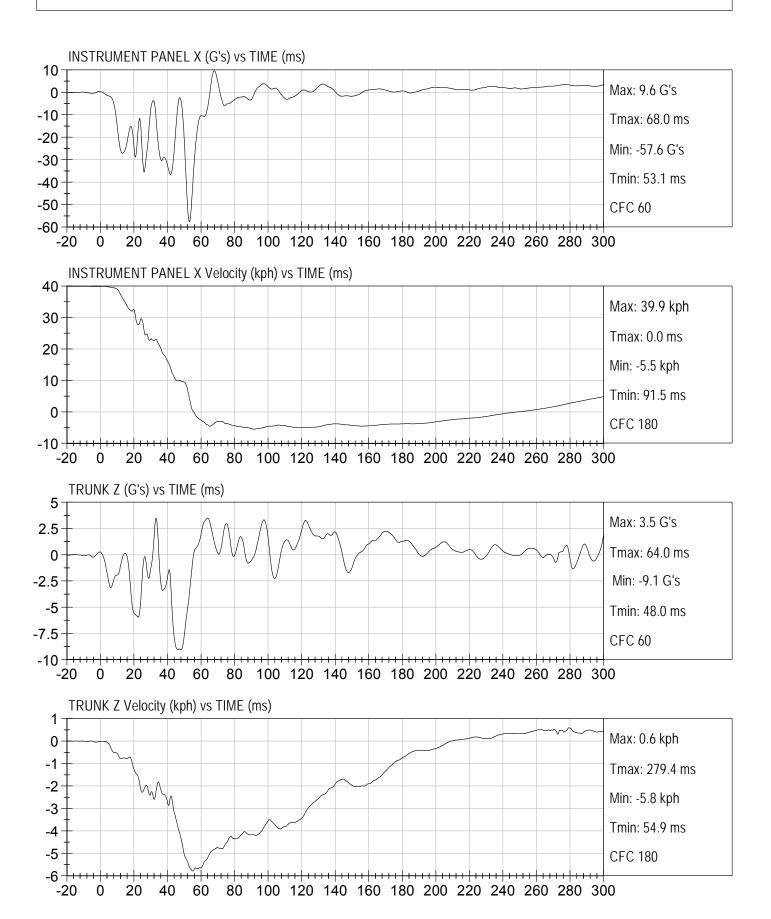


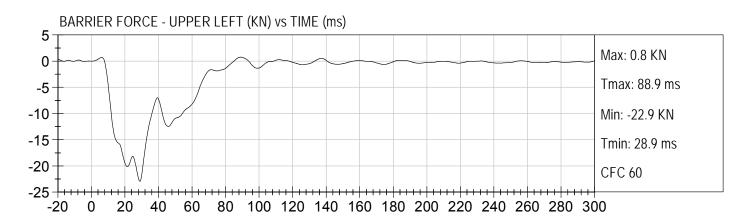


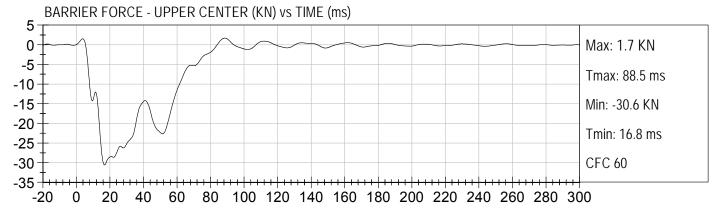


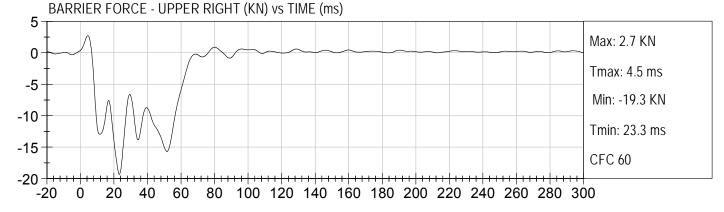


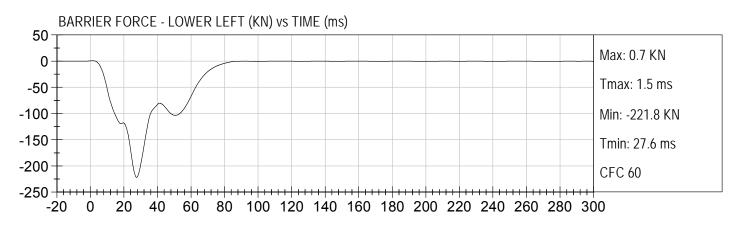


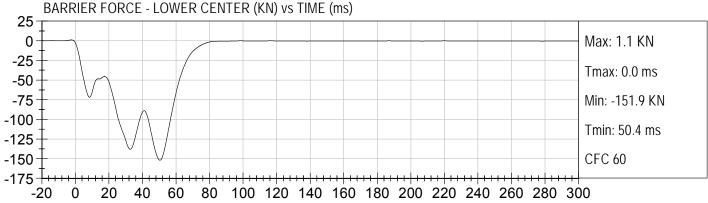


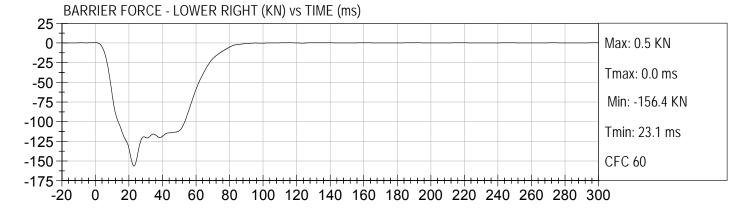


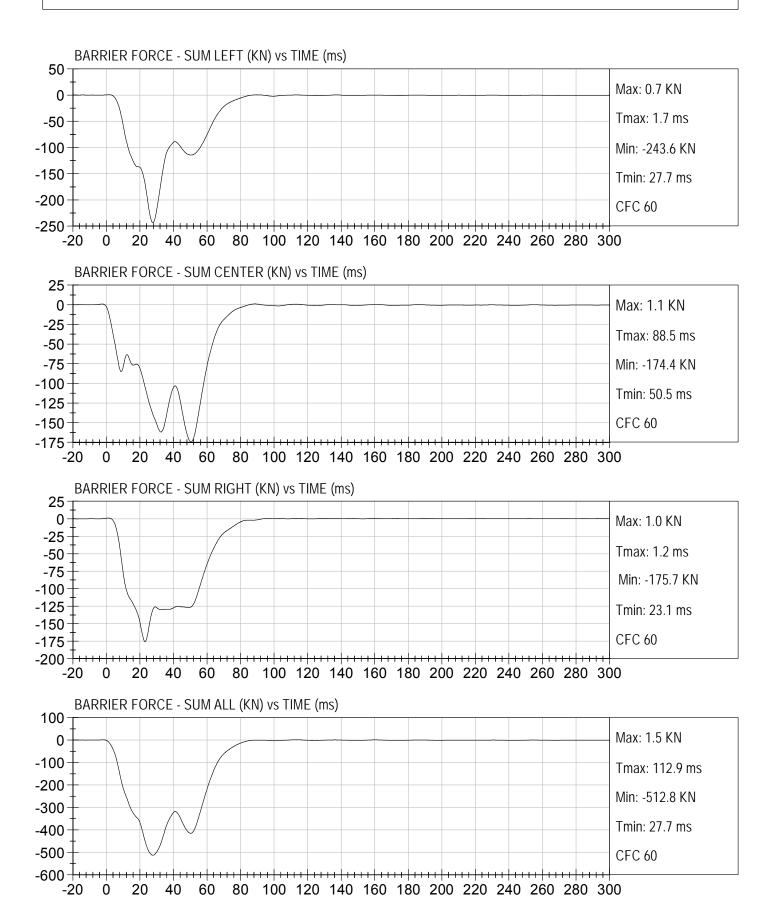












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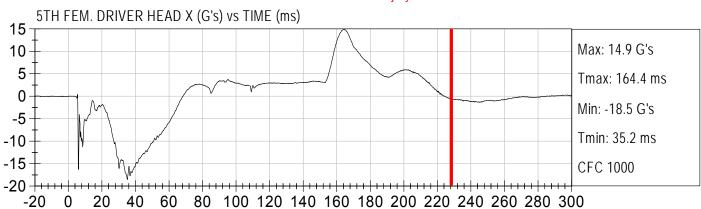
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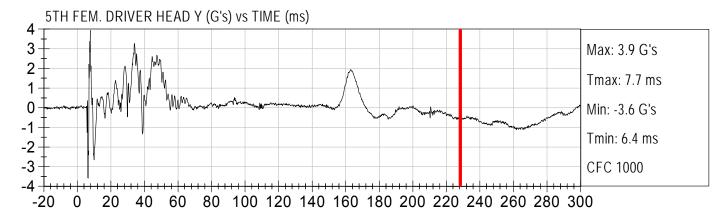
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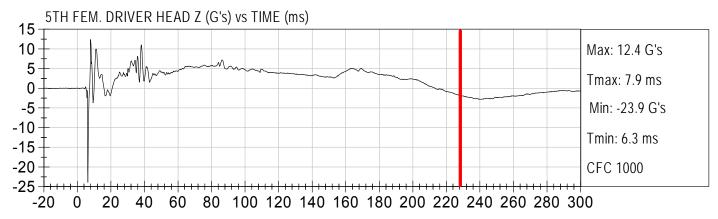
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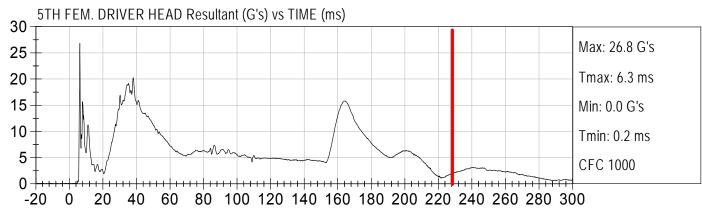
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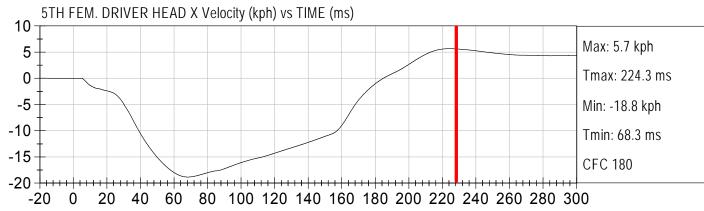


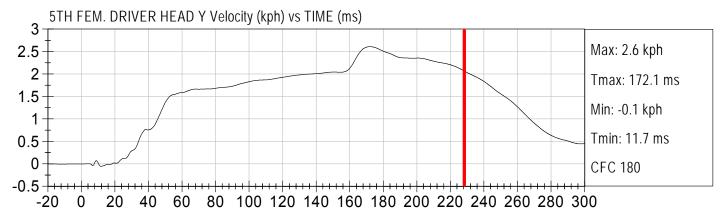


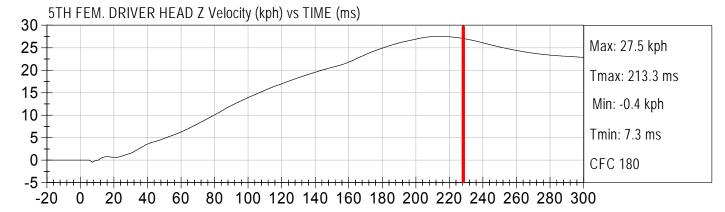


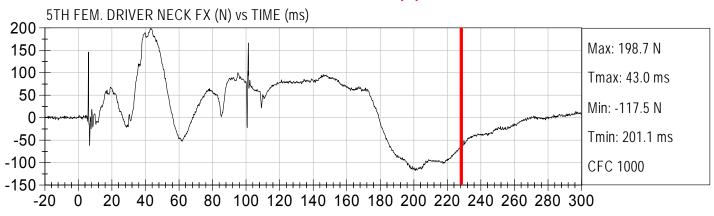
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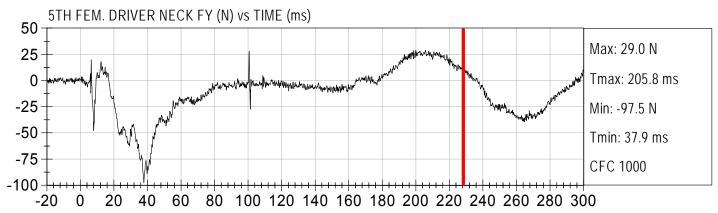
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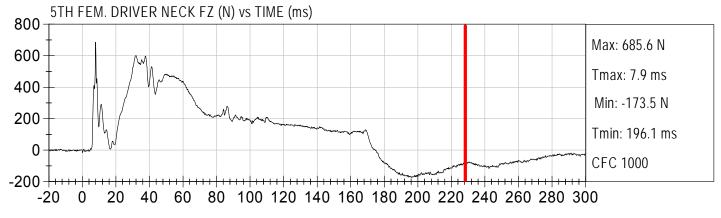


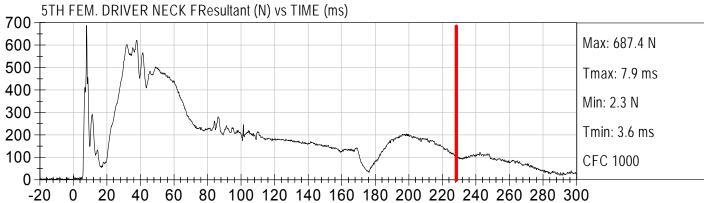












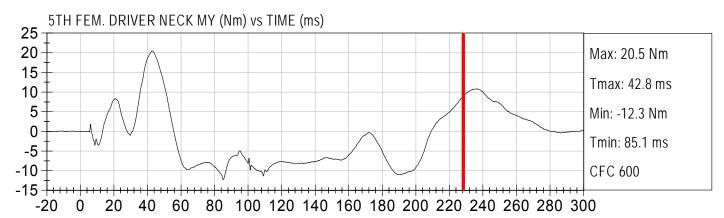
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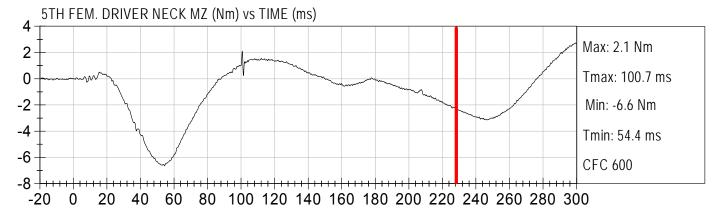
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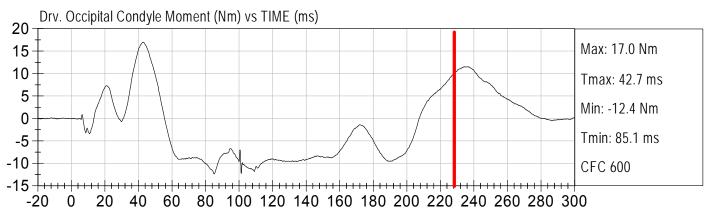
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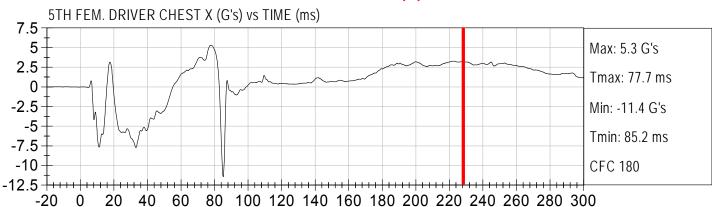
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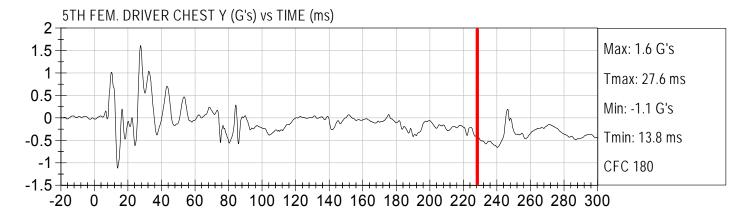


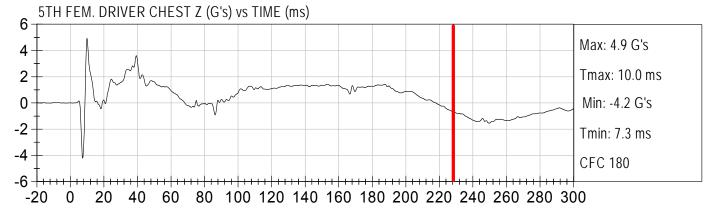


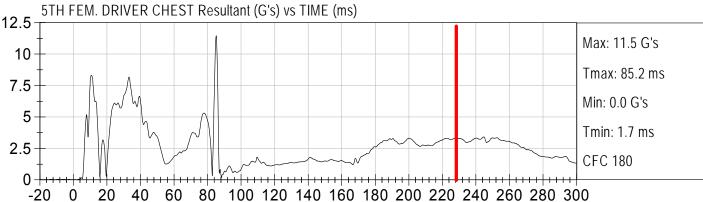


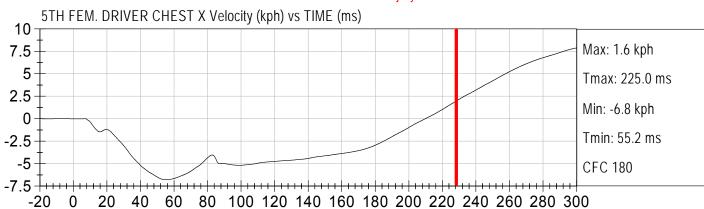


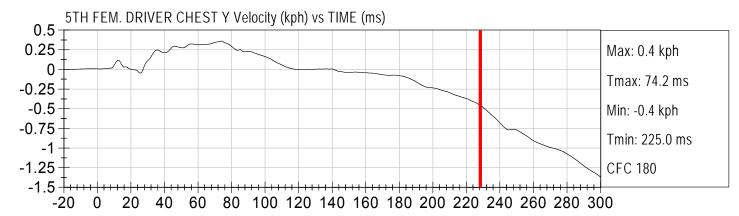


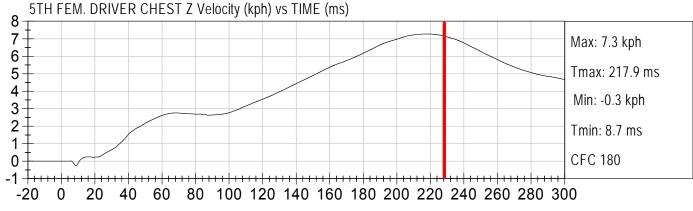


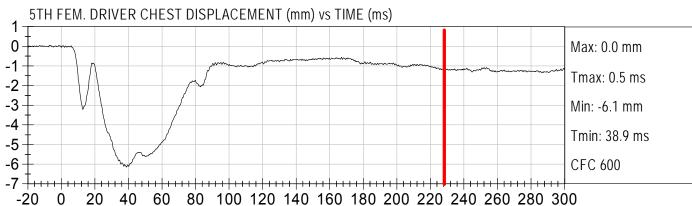






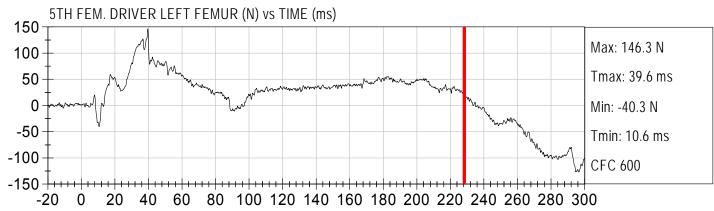


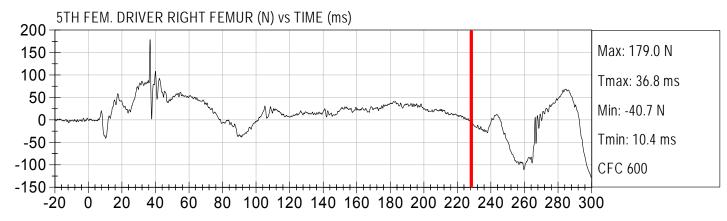




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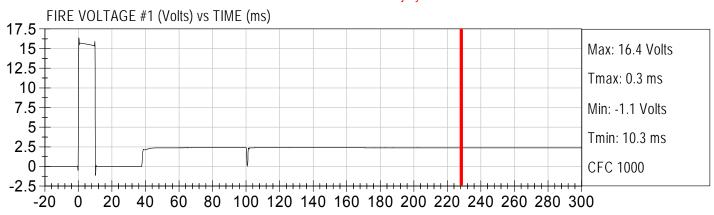
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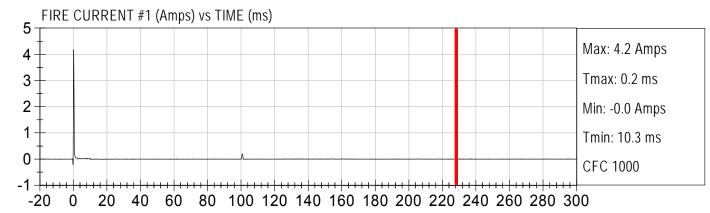


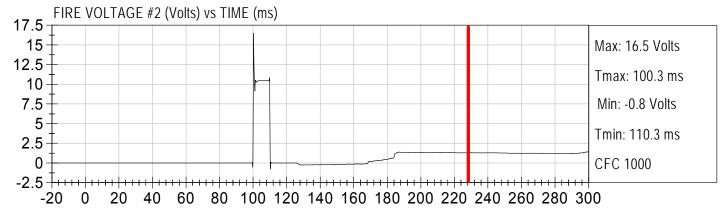


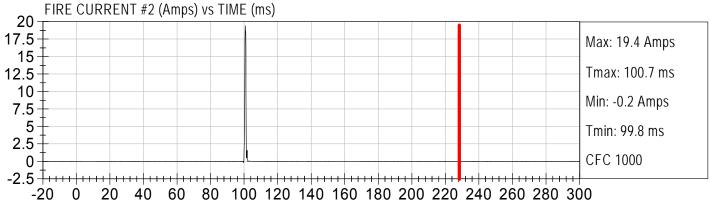
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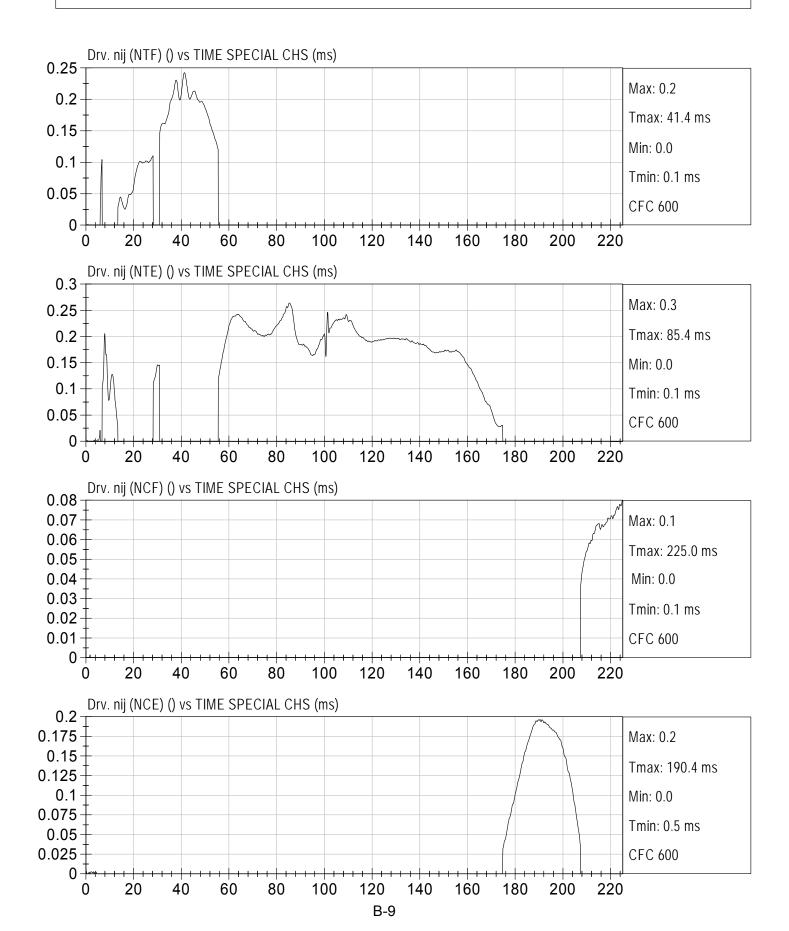
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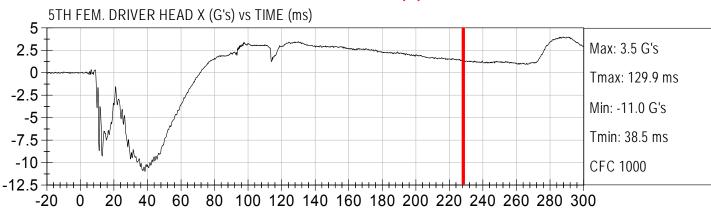


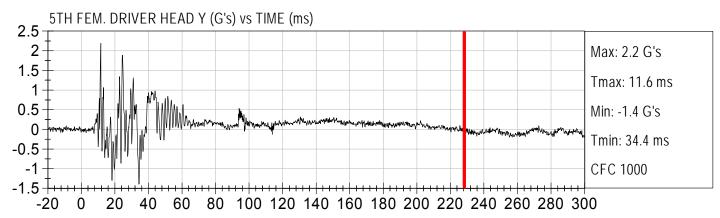


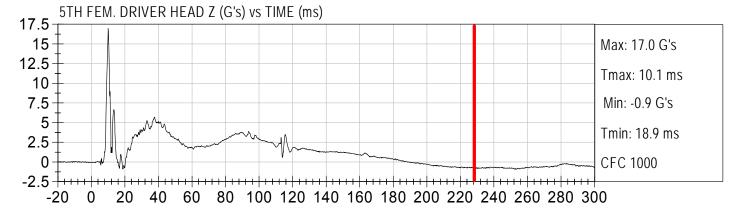


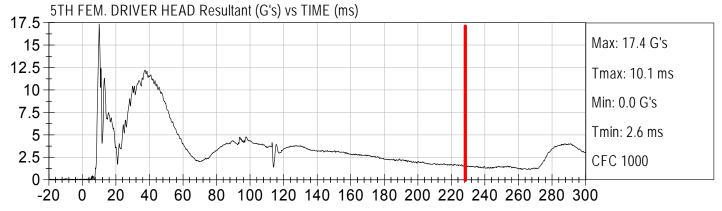
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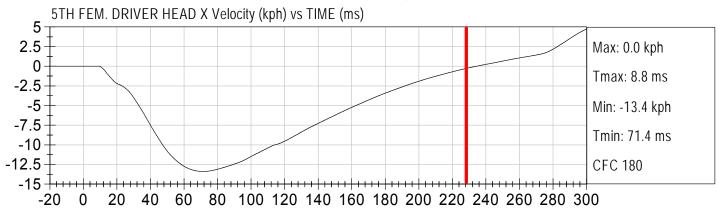


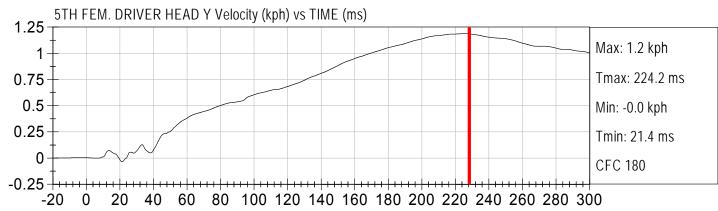


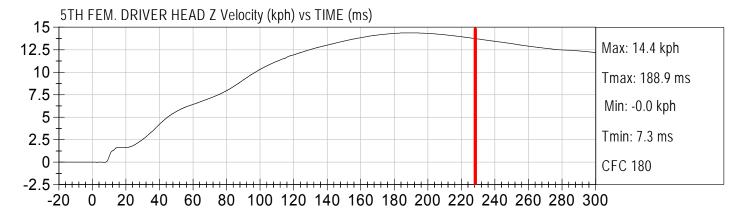


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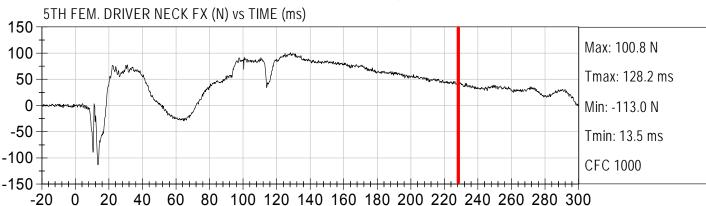


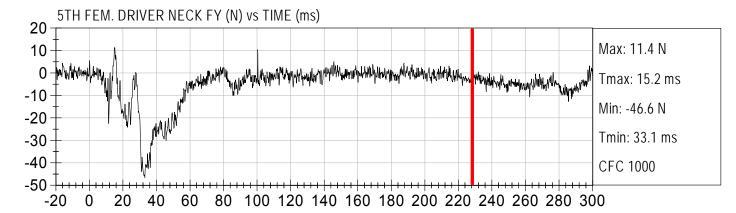


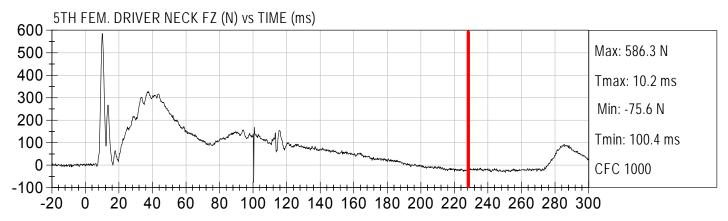


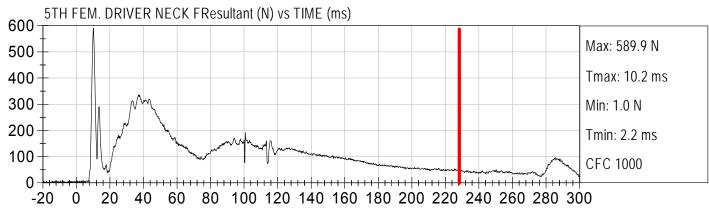
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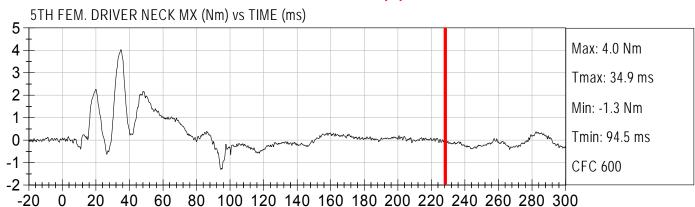
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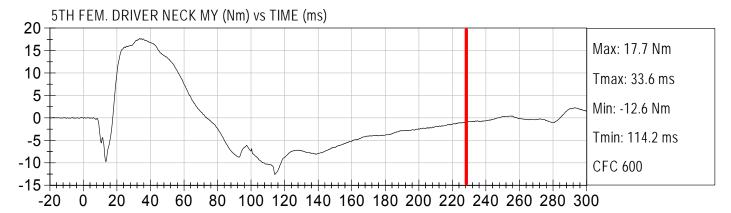


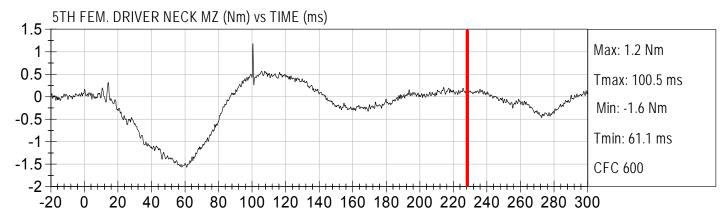


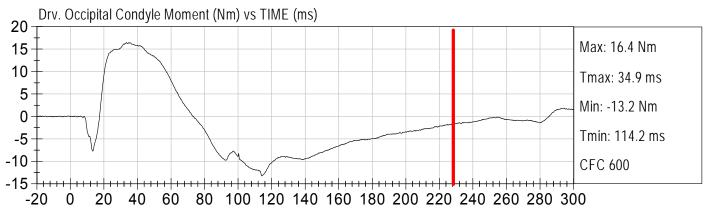


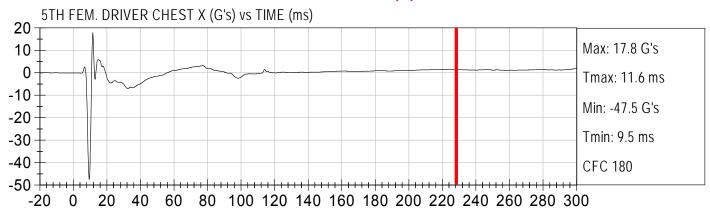


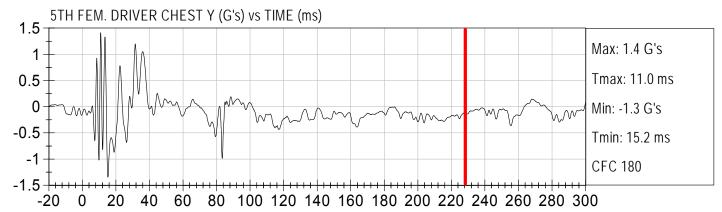


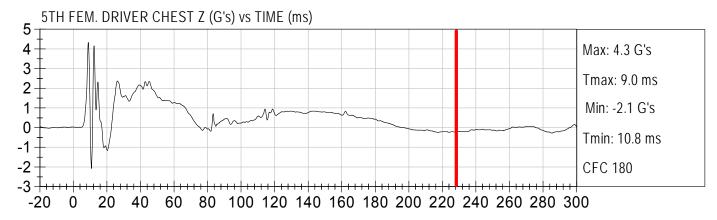


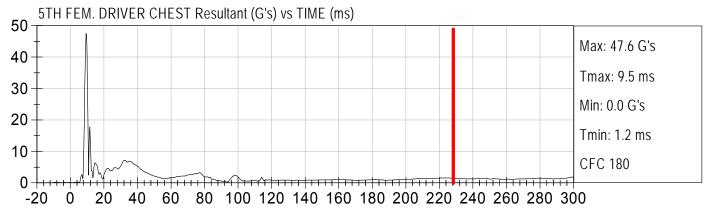


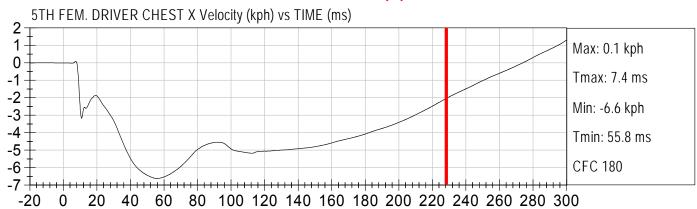




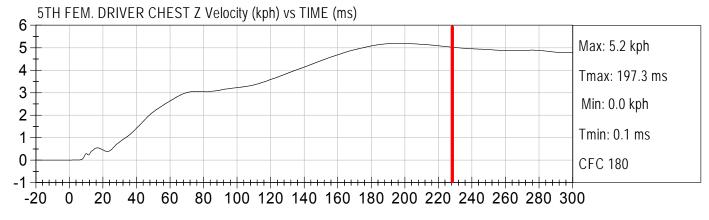


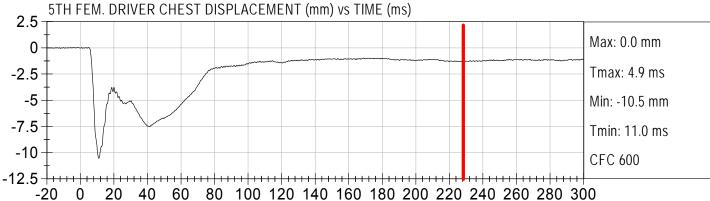




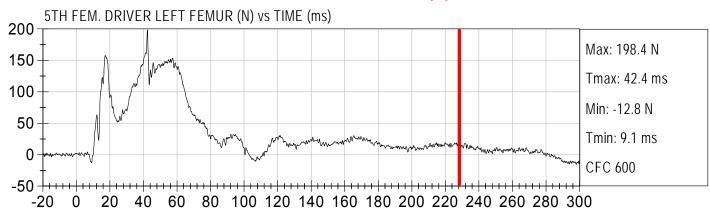


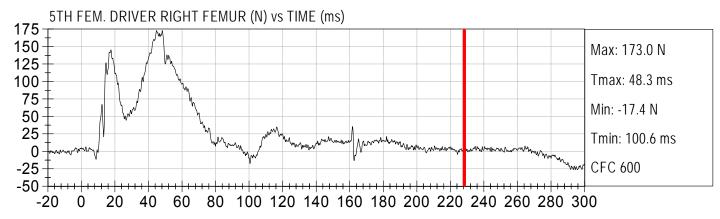




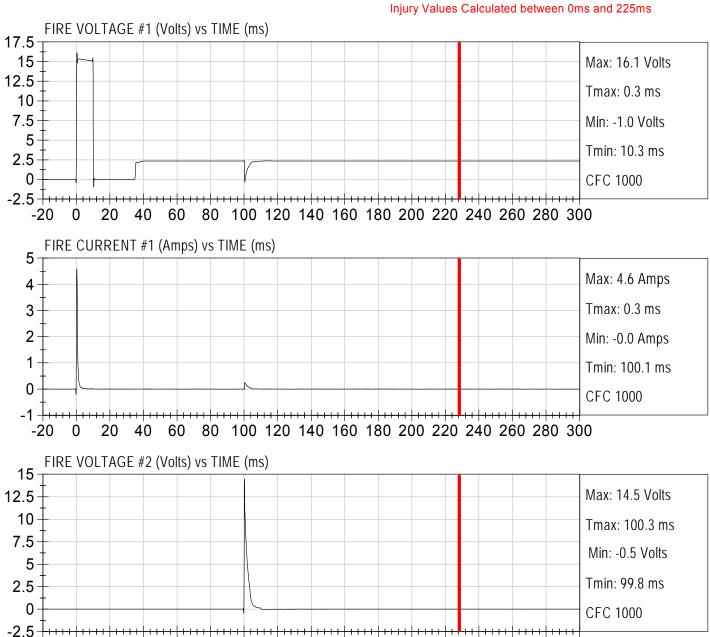


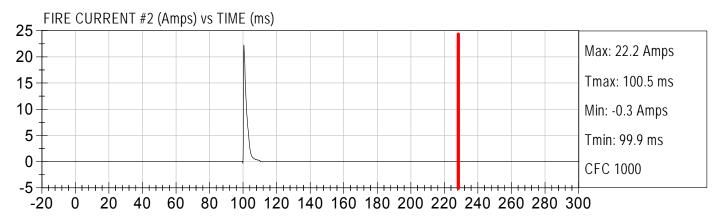
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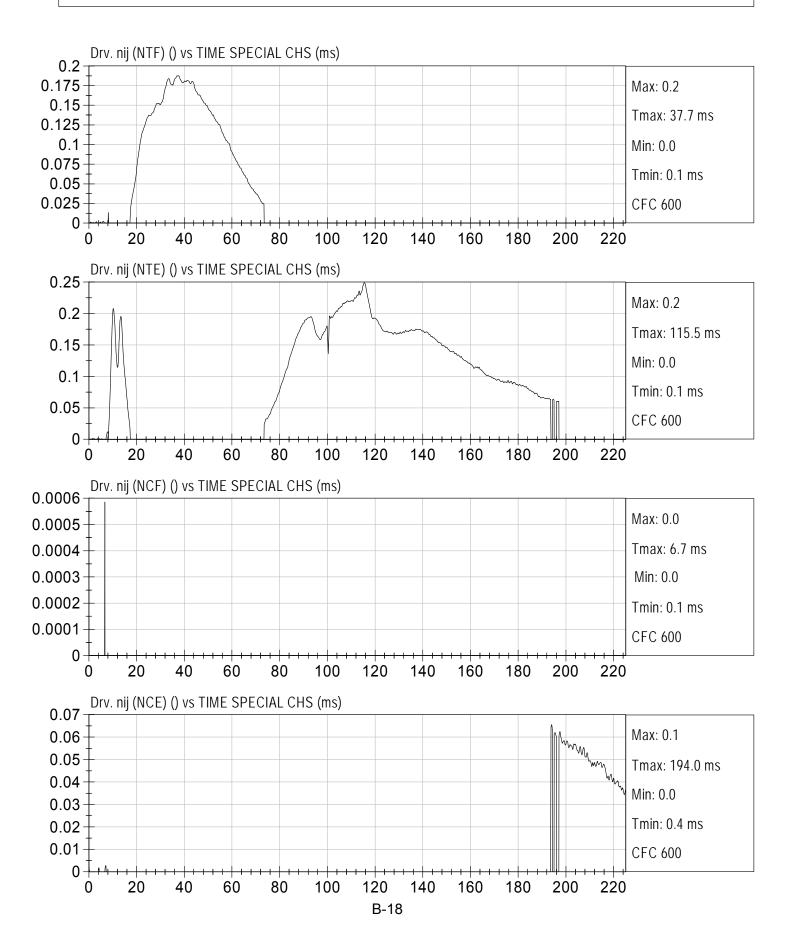


Test Date: 6/9/08 Speed: 0.0 mph (0.0 km/h)





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# APPENDIX C CRASH TEST PHOTOGRAPHS

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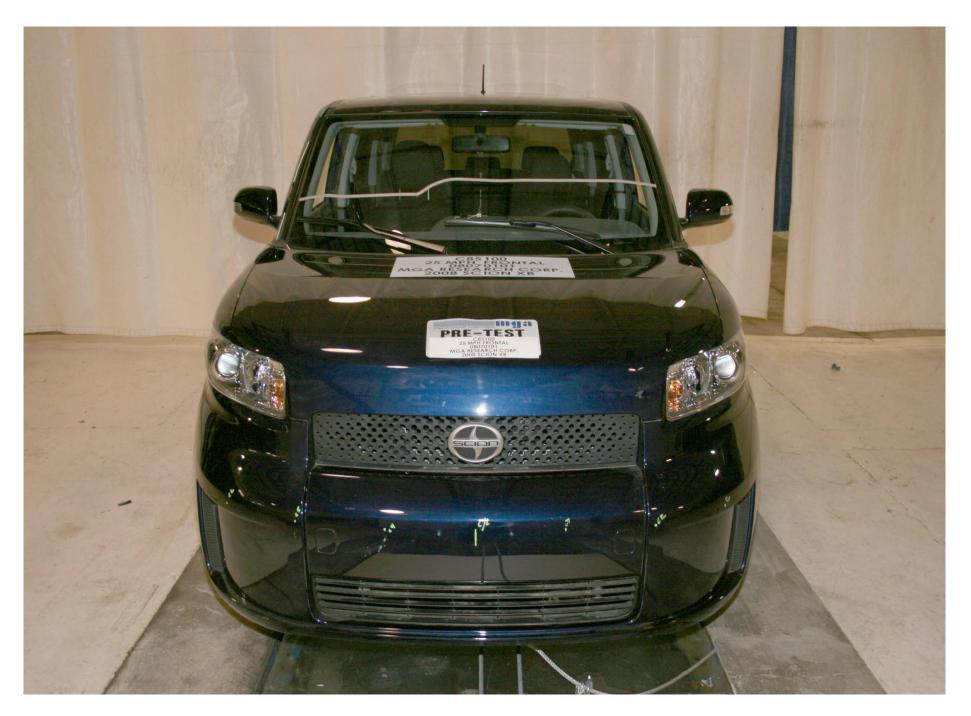
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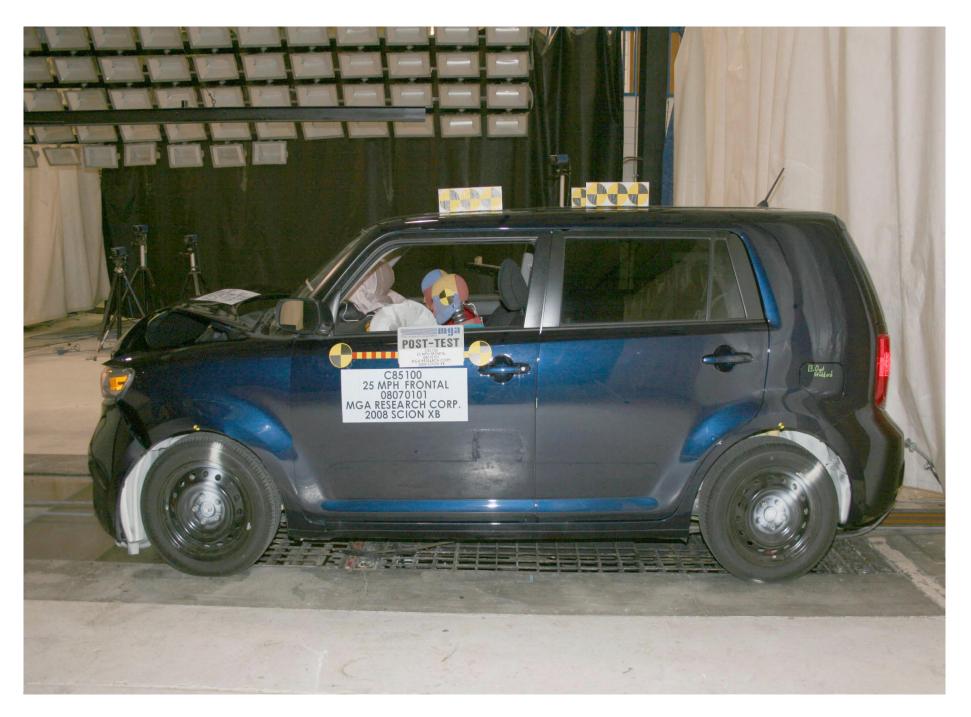
Pre-Test Front View of Test Vehicle



Post-Test Front View of Test Vehicle



Pre-Test Left Side View of Test Vehicle



Post-Test Left Side View of Test Vehicle



Pre-Test Right Side View of Test Vehicle



Post-Test Right Side View of Test Vehicle



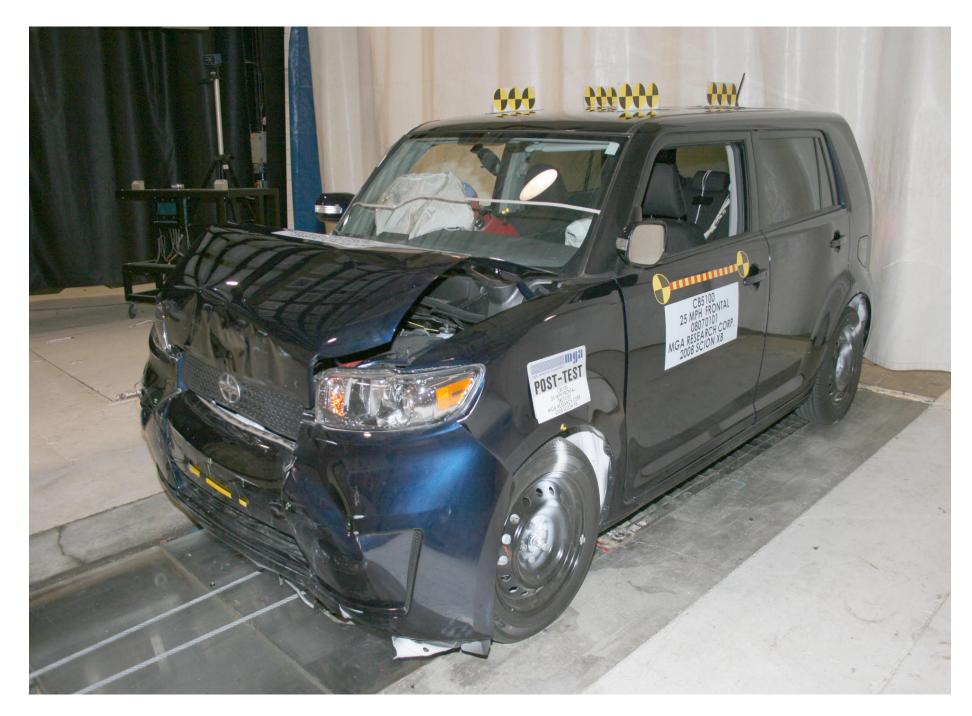
Pre-Test Right Front Three-Quarter View of Test Vehicle



Post-Test Right Front Three-Quarter View of Test Vehicle



Pre-Test Left Front Three-Quarter View of Test Vehicle



Post-Test Left Front Three-Quarter View of Test Vehicle



Pre-Test Right Rear Three-Quarter View of Test Vehicle



Post-Test Right Rear Three-Quarter View of Test Vehicle



Pre-Test Left Rear Three-Quarter View of Test Vehicle



Post-Test Left Rear Three-Quarter View of Test Vehicle



Pre-Test Rear View of Test Vehicle



Post-Test Rear View of Test Vehicle



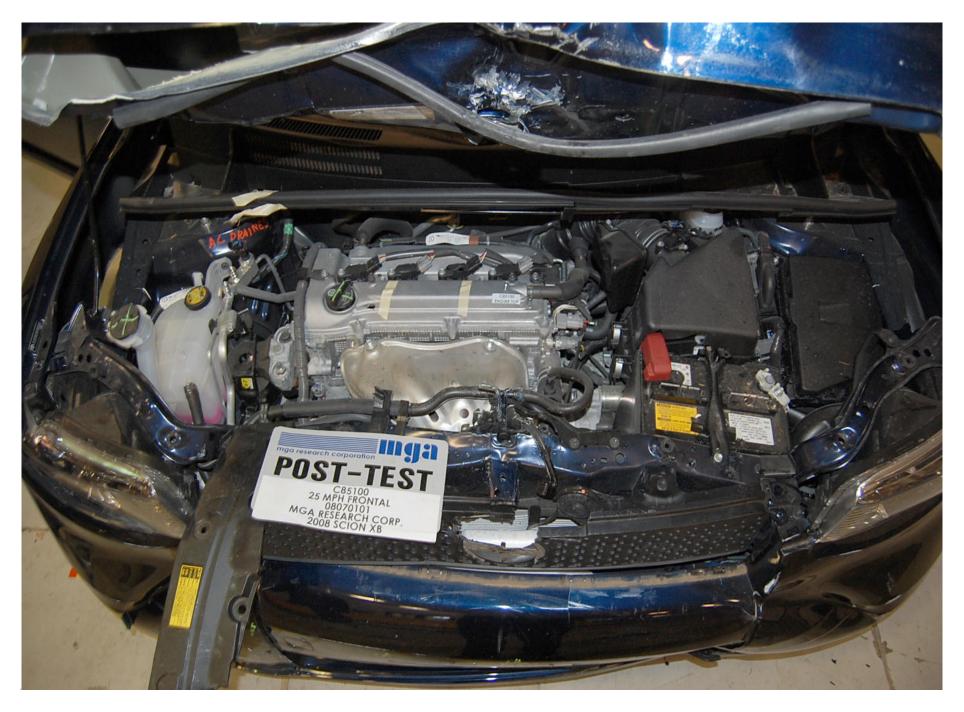
Pre-Test Windshield View



Post-Test Windshield View



Pre-Test Engine Compartment View

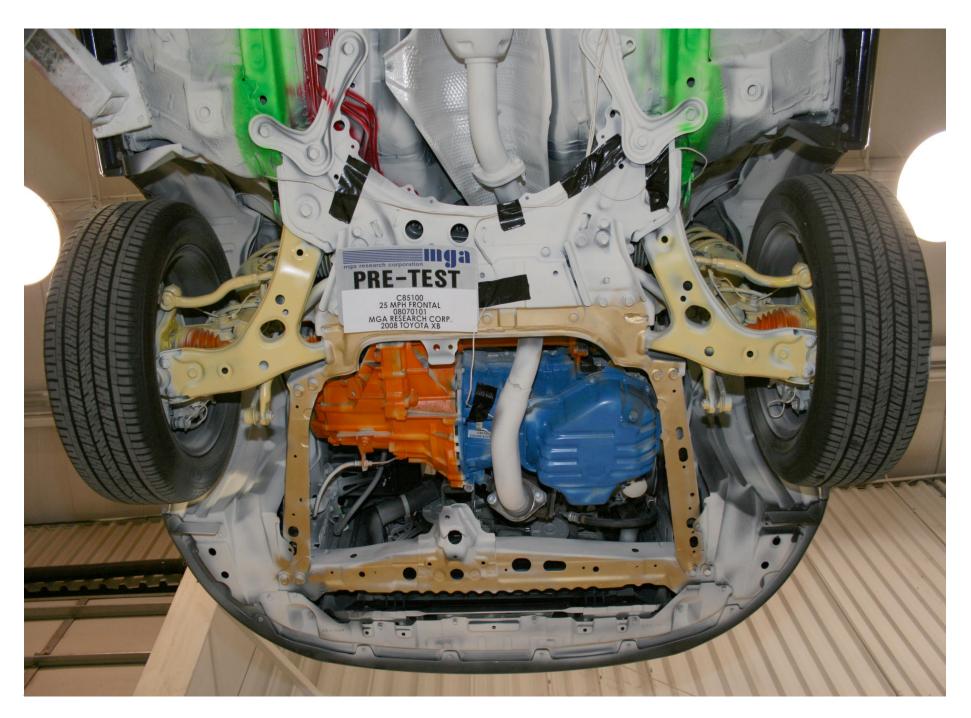


Post-Test Engine Compartment View

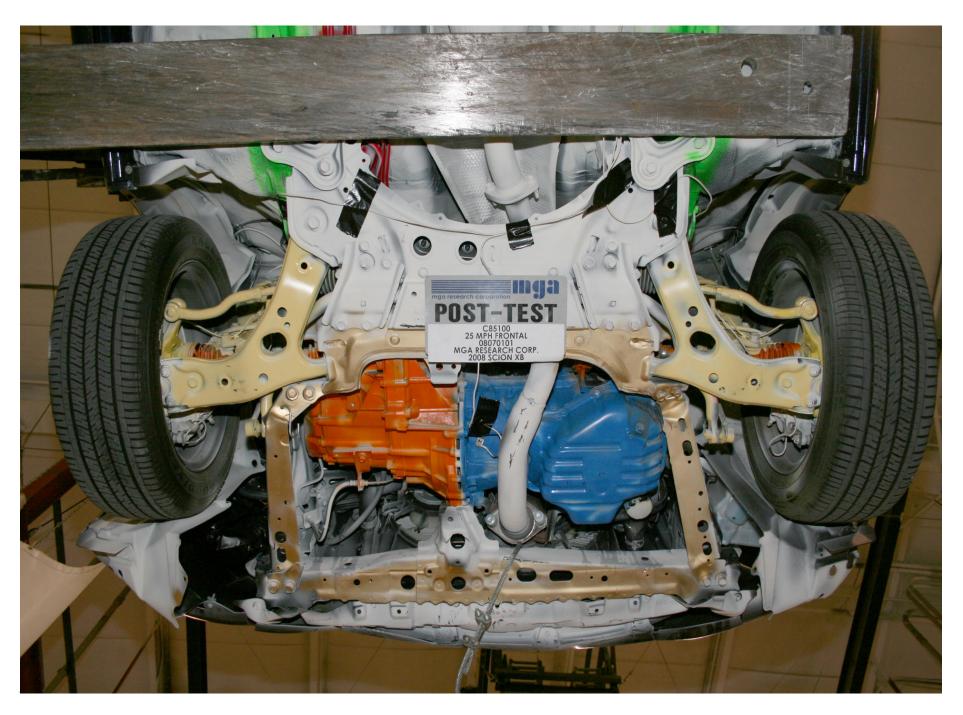




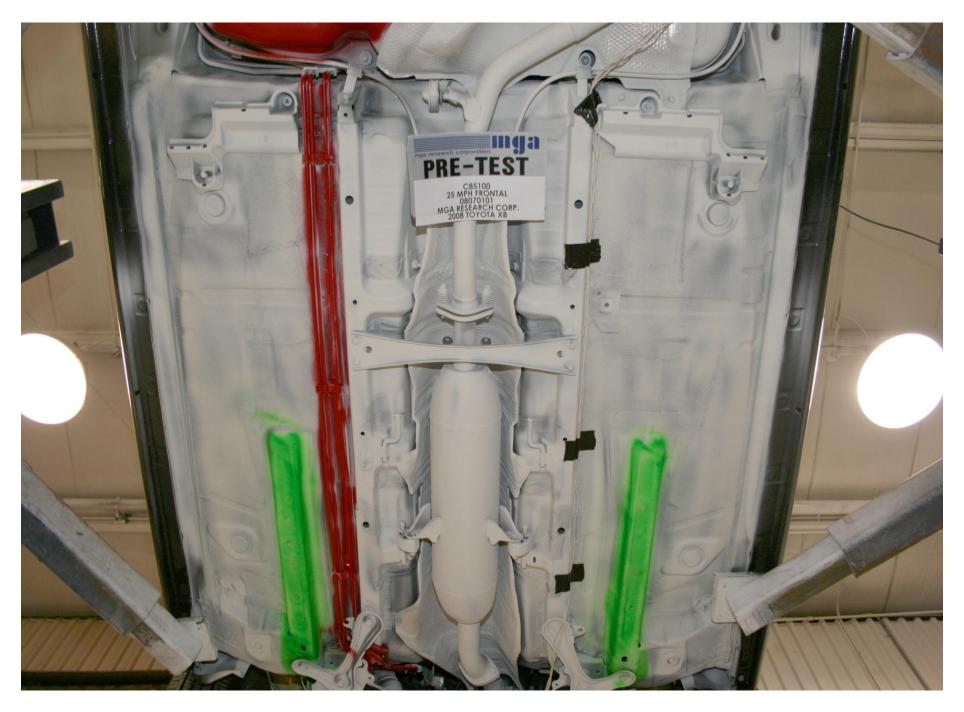
Post-Test Fuel Filler Cap View



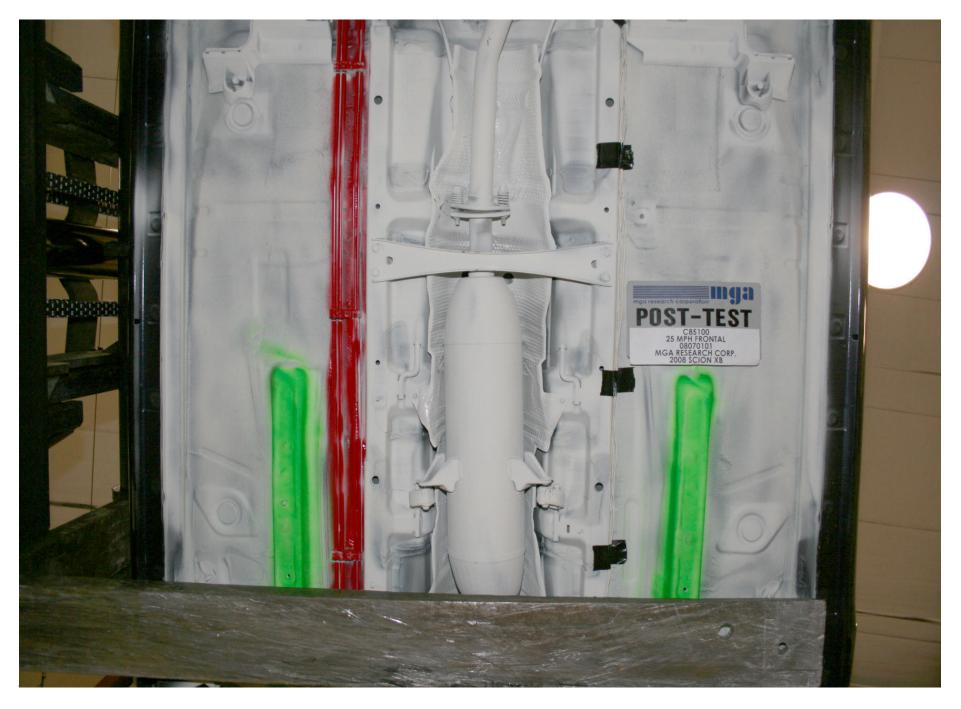
Pre-Test Front Underbody View



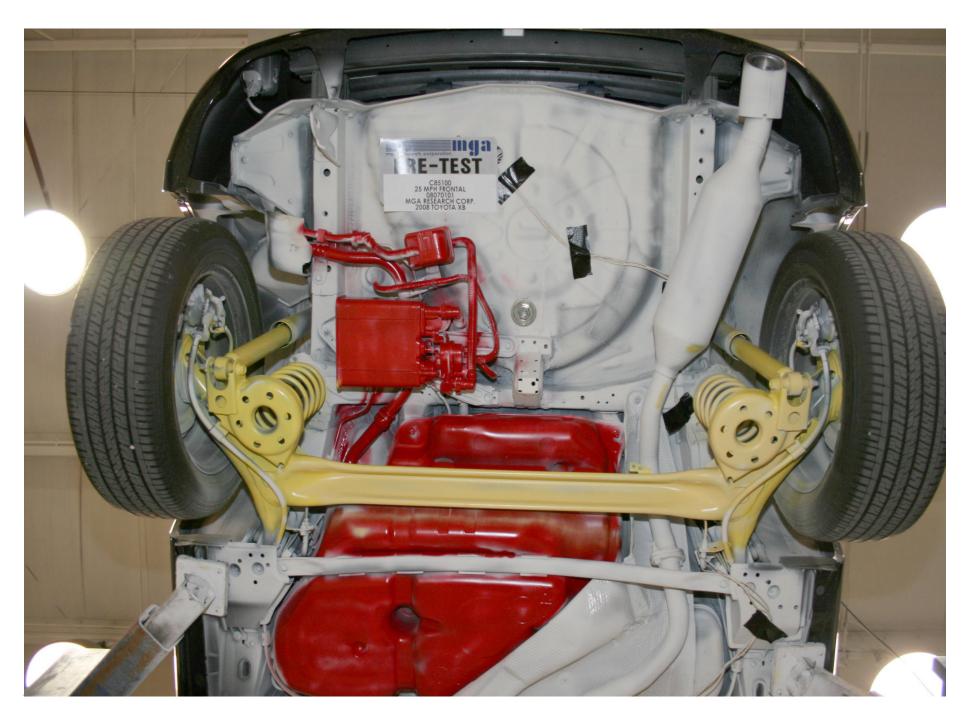
Post-Test Front Underbody View



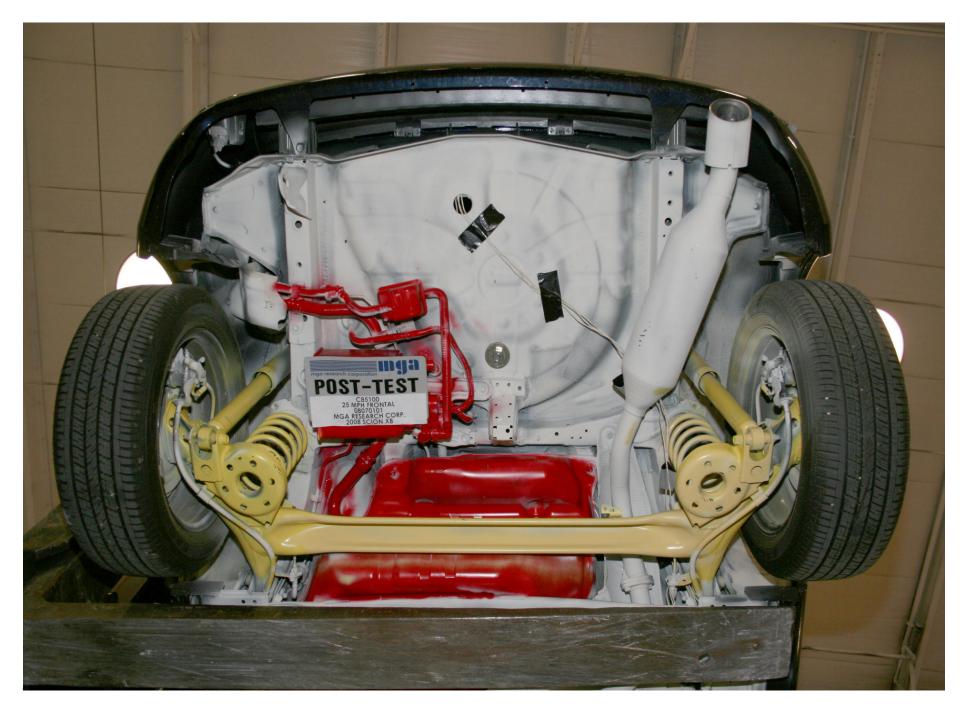
Pre-Test Mid Underbody View



Post-Test Mid Underbody View



Pre-Test Rear Underbody View



Post-Test Rear Underbody View



Pre-Test Driver Dummy Front View (head position)



Post-Test Driver Dummy Front View (head position)



Pre-Test Driver Dummy Position Left Side View



Post-Test Driver Dummy Position Left Side View



Pre-Test Driver Dummy Position Left Side View (Door Open)



Post-Test Driver Dummy Position Left Side View (Door Open)





Post-Test Driver Dummy Seat Position



Pre-Test Driver Dummy Feet Position



Post-Test Driver Dummy Feet Position



Pre-Test Driver Side Knee Bolster View



Post-Test Driver Side Knee Bolster View



Post-Test Driver Dummy Knee Contact (left side view)



Post-Test Driver Dummy Knee Contact (right side view)



Post-Test Driver Dummy Airbag Contact



Post-Test Driver Dummy Head Contact (header and visor)



Pre-Test Passenger Dummy Front View (head position)



Post-Test Passenger Dummy Front View (head position)



Pre-Test Passenger Dummy Position Right Side View



Post-Test Passenger Dummy Position Right Side View



Pre-Test Passenger Dummy Position Right Side View (Door Open)



Post-Test Passenger Dummy Position Right Side View (Door Open)





Post-Test Passenger Dummy Seat Position



Pre-Test Passenger Dummy Feet Position



Post-Test Passenger Dummy Feet Position



Pre-Test Passenger Side Knee Bolster View



Post-Test Passenger Side Knee Bolster View



Post-Test Passenger Dummy Knee Contact



Post-Test Passenger Dummy Airbag Contact



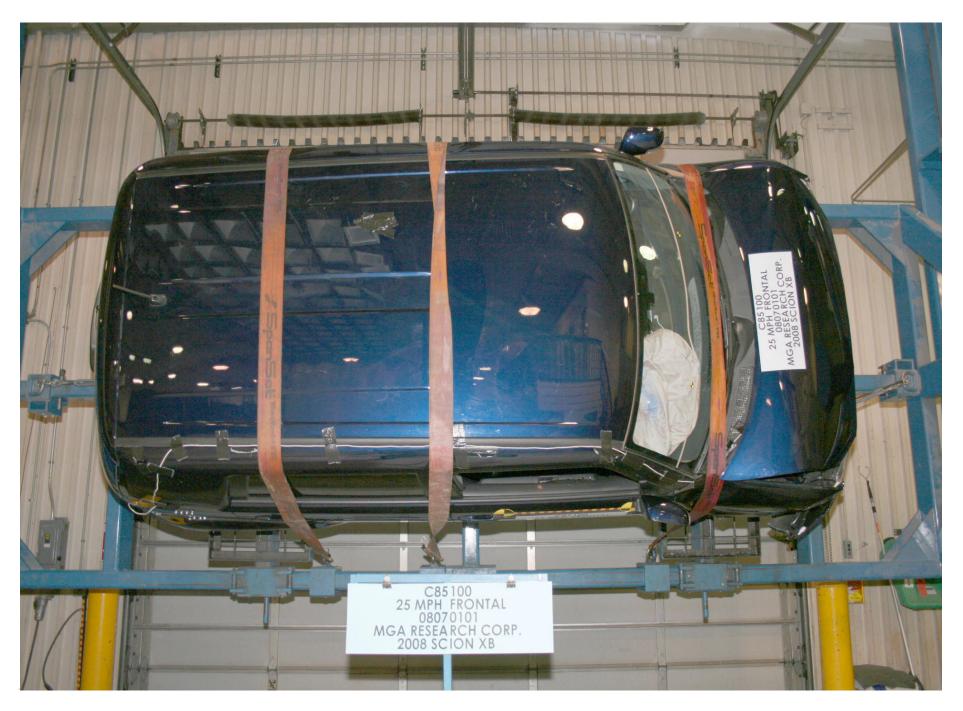
Post-Test Passenger Dummy Head Contact



Rollover 90 Degrees



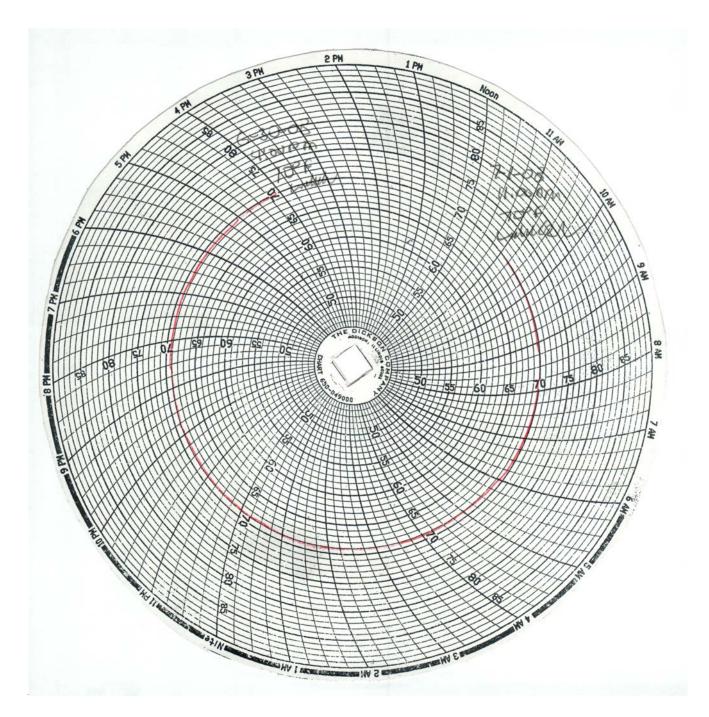
Rollover 180 Degrees



Rollover 270 Degrees



Rollover 360 Degrees



Temperature Plot



Vehicle in Relation to The Load Cell Grid

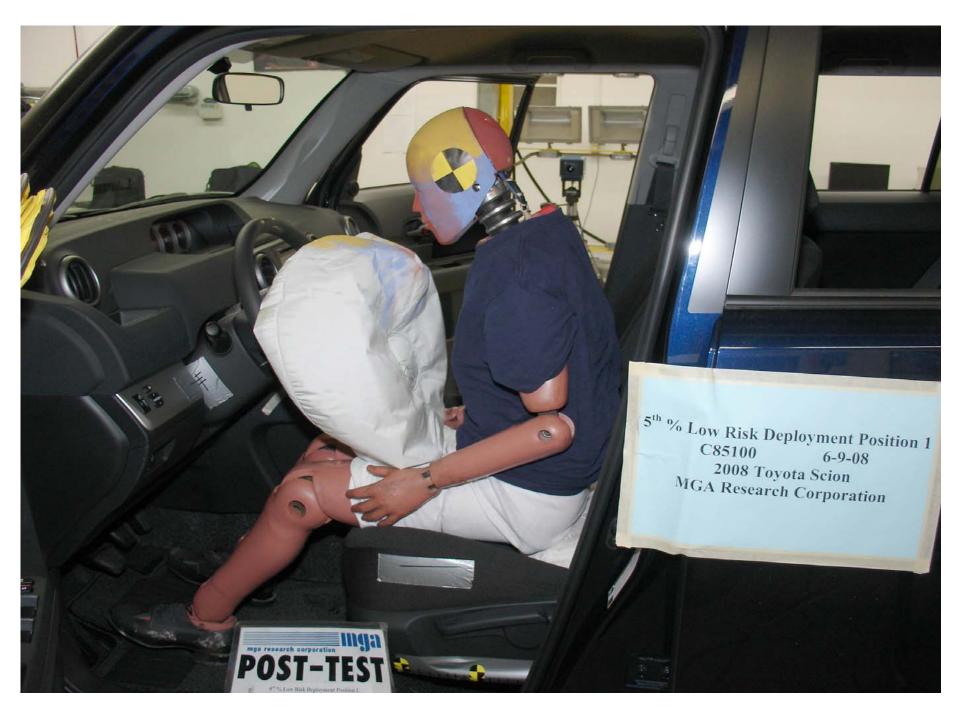
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Pre-Test 5th Fem. P1 Driver Dummy Left Side View



Post-Test 5th Fem. P1 Driver Dummy Left Side View



Pre-Test 5th Fem. P1 Driver Dummy Right Side View



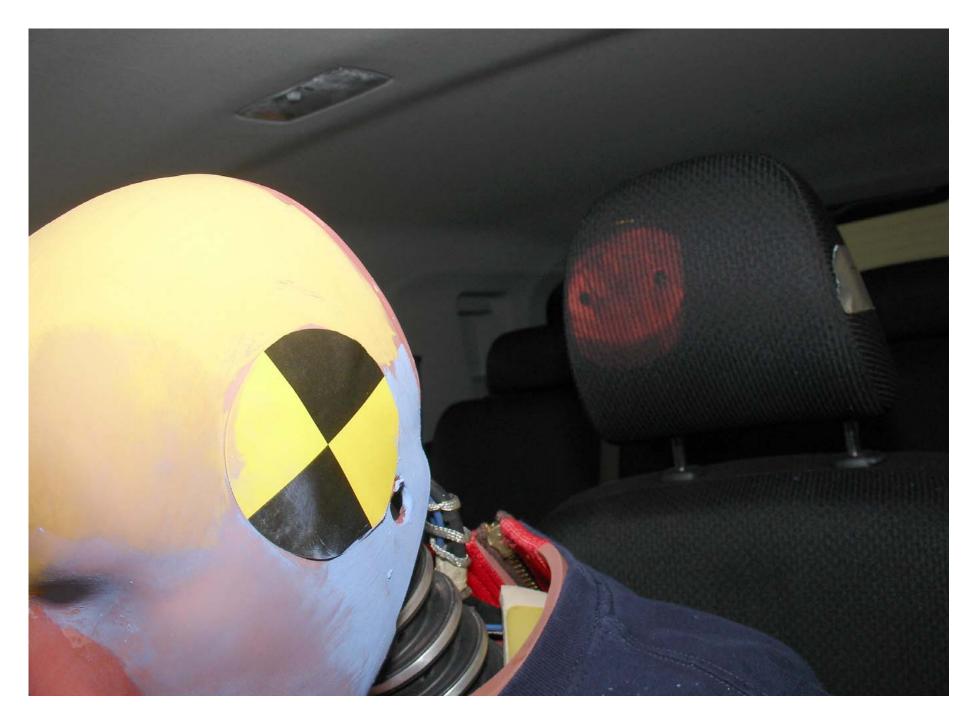
Post-Test 5th Fem. P1 Driver Dummy Right Side View



Post-Test 5th Fem. P1 Driver Dummy Airbag Left Side View



Post-Test 5th Fem. P1 Driver Dummy Airbag Right Side View



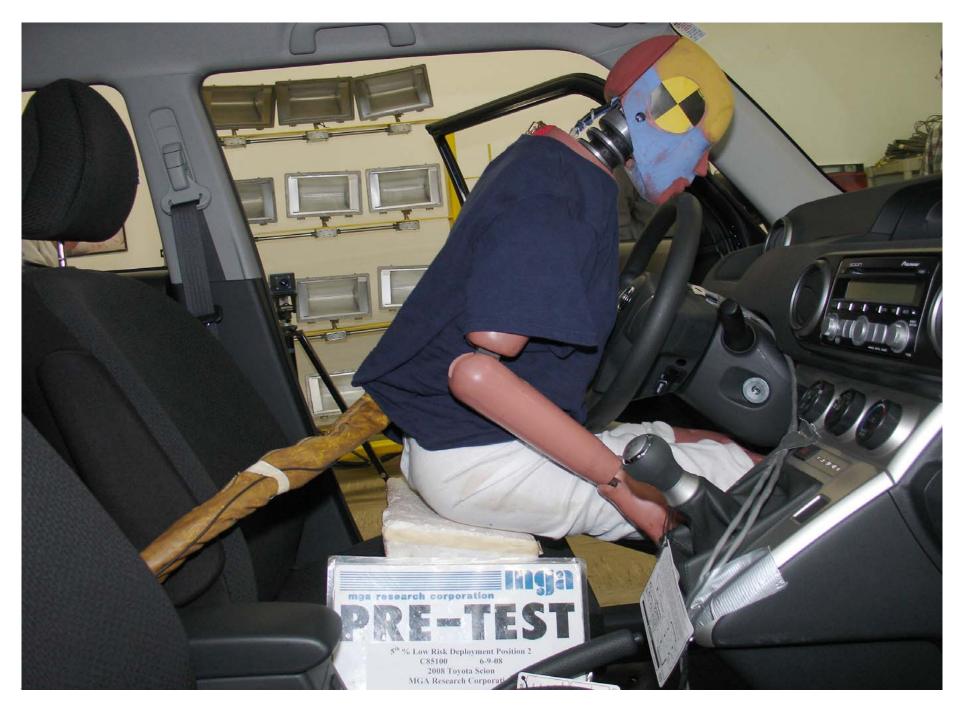
Post-Test 5th Fem. P1 Driver Dummy Head Contact (headrest)



Pre-Test 5th Fem. P2 Driver Dummy Left Side View



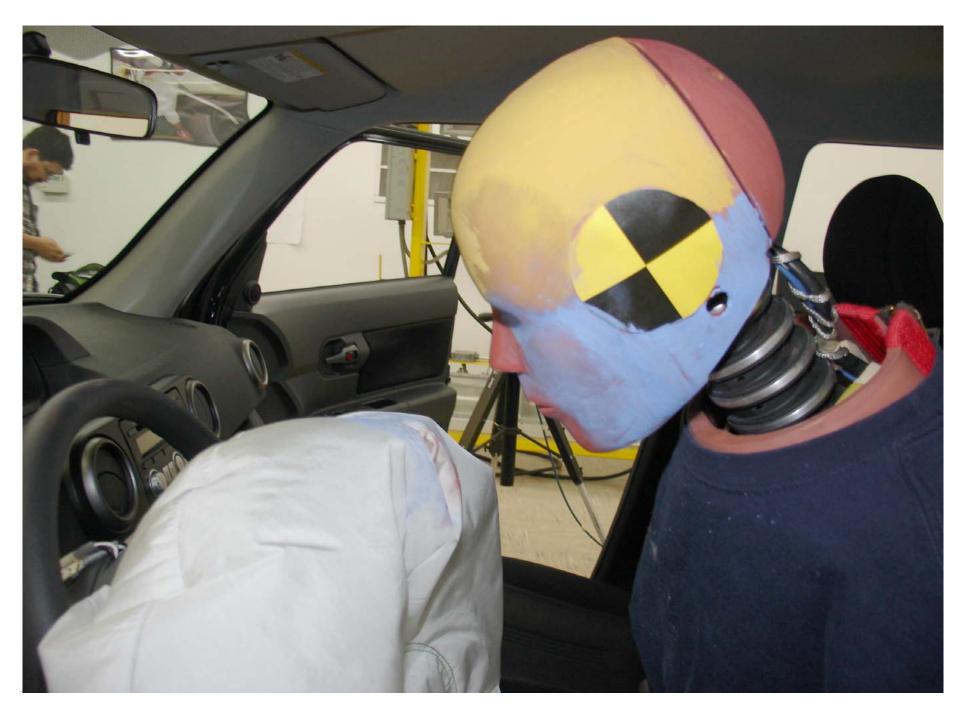
Post-Test 5th Fem. P2 Driver Dummy Left Side View



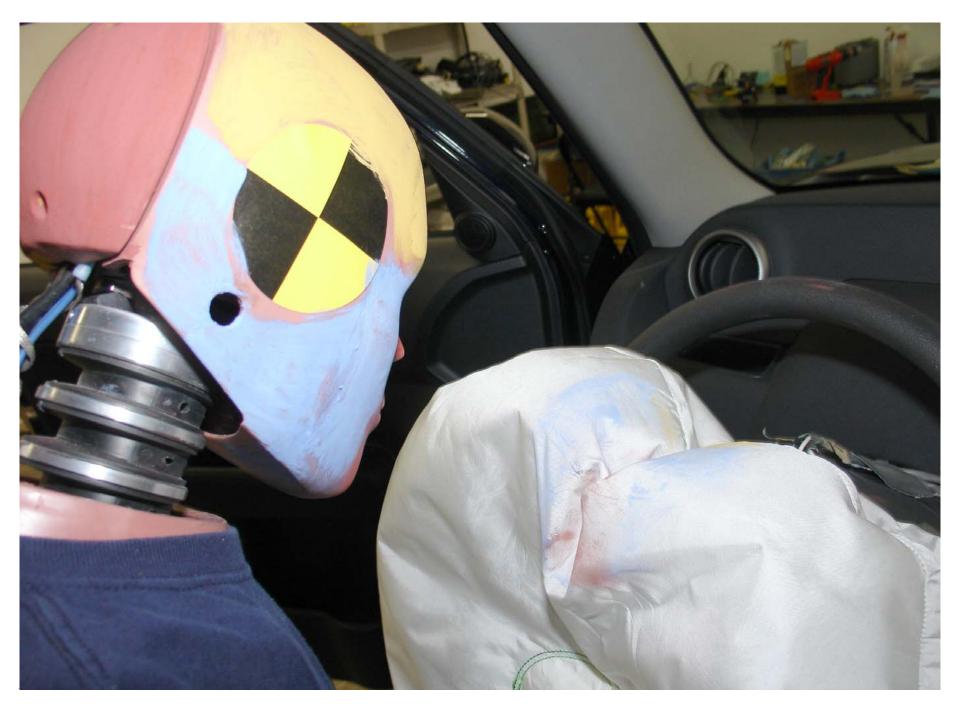
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Post-Test 5th Fem. P2 Driver Dummy Right Side View



Post-Test 5th Fem. P2 Driver Dummy Airbag Left Side View



Post-Test 5th Fem. P2 Driver Dummy Airbag Right Side View

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Cosco Dream Ride Car Bed Belted, Middle Seat Track



Unbelted 5th Percentile Female Reactivation, Middle Seat Track



Car Bed

Cosco Dream Ride Car Bed Belted, Rearward Seat Track





Britax Handle With Care 191 Belted, Forward Seat Track



Britax Handle With Care 191 Belted, Rearward Seat Track



Britax Handle With Care 191 Belted, Middle Seat Track



Britax Handle With Care 191 Unbelted, Forward Seat Track



Britax Handle With Care 191 Unbelted, Middle Seat Track



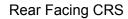
Britax Handle With Care 191 Forward Facing Unbelted, Forward Seat Track



Britax Handle With Care 191 Unbelted, Rearward Seat Track



Britax Handle With Care 191 Forward Facing Unbelted, Middle Seat Track





Britax Handle With Care 191 Forward Facing Unbelted, Rearward Seat Track



Unbelted 5th Percentile Female Reactivation, Rearward Seat Track





Evenflo First Choice 204 Belted, Forward Seat Track



Evenflo First Choice 204 Belted, Rearward Seat Track



Evenflo First Choice 204 Belted, Middle Seat Track



Evenflo First Choice 204 Unbelted, Forward Seat Track



Evenflo First Choice 204 Unbelted, Middle Seat Track



Evenflo First Choice 204 Forward Facing Unbelted, Forward Seat Track



Evenflo First Choice 204 Unbelted, Rearward Seat Track



Evenflo First Choice 204 Forward Facing Unbelted, Middle Seat Track

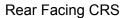




Evenflo First Choice 204 Forward Facing Unbelted, Rearward Seat Track



Unbelted 5th Percentile Female Reactivation, Middle Seat Track





Graco Infant W/ Base Belted, Forward Seat Track



Graco Infant W/ Base Belted, Rearward Seat Track



Graco Infant W/ Base Belted, Middle Seat Track



Graco Infant W/ Base Unbelted, Forward Seat Track



Graco Infant W/ Base Unbelted, Middle Seat Track



Graco Infant W/ Base Forward Facing Unbelted,
Forward Seat Track



Graco Infant W/ Base Unbelted, Rearward Seat Track



Graco Infant W/ Base Forward Facing Unbelted, Middle Seat Track





Graco Infant W/ Base Forward Facing Unbelted, Rearward Seat Track



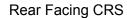
Graco Infant W/O Base Belted, Middle Seat Track



Graco Infant W/O Base Belted, Forward Seat Track



Graco Infant W/O Base Belted, Rearward Seat Track





Graco Infant W/O Base Unbelted, Forward Seat Track



Graco Infant W/O Base Unbelted, Rearward Seat Track



Graco Infant W/O Base Unbelted, Middle Seat Track



Graco Infant W/O Base Forward Facing Unbelted, Forward Seat Track





Graco Infant W/O Base Forward Facing Unbelted, Middle Seat Track



Unbelted 5th Percentile Female Reactivation, Forward Seat Track



Graco Infant W/O Base Forward Facing Unbelted, Rearward Seat Track



Britax Roundabout 161 Forward Facing Belted, Forward Seat Track



Britax Roundabout 161 Forward Facing Belted, Rearward Seat Track



Britax Roundabout 161 Forward Facing Belted, Middle Seat Track



Britax Roundabout 161 Forward Facing Unbelted, Forward Seat Track



Britax Roundabout 161 Forward Facing Unbelted, Middle Seat Track



Britax Roundabout 161 Rear Facing Belted, Forward Seat Track



Britax Roundabout 161 Forward Facing Unbelted, Rearward Seat Track



Britax Roundabout 161 Rear Facing Belted, Middle Seat Track



Britax Roundabout 161 Rear Facing Belted, Rearward Seat Track



Britax Roundabout 161 Rear Facing Unbelted, Middle Seat Track



Britax Roundabout 161 Rear Facing Unbelted, Forward Seat Track



Britax Roundabout 161 Rear Facing Unbelted, Rearward Seat Track



Unbelted 5th Percentile Female Reactivation, Forward Seat Track



Century Encore Forward Facing Belted, Forward Seat Track



Century Encore Forward Facing Belted, Rearward Seat Track



Century Encore Forward Facing Belted, Middle Seat Track



Century Encore Forward Facing Unbelted, Forward Seat Track



Century Encore Forward Facing Unbelted, Middle Seat Track



Century Encore Rear Facing Belted, Forward Seat Track



Century Encore Forward Facing Unbelted, Rearward Seat Track



Century Encore Rear Facing Belted, Middle Seat Track



Century Encore Rear Facing Belted, Rearward Seat Track



Century Encore Rear Facing Unbelted, Middle Seat Track



Century Encore Rear Facing Unbelted, Forward Seat Track



Century Encore Rear Facing Unbelted, Rearward Seat Track



Unbelted 5th Percentile Female Reactivation, Middle Seat Track



Evenflo Medallion 254 Forward Facing Belted, Forward Seat Track



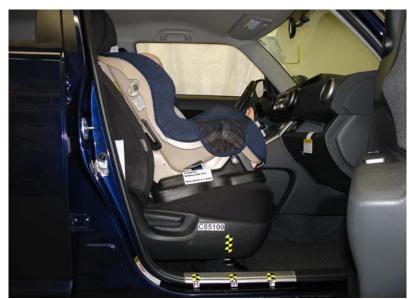
Evenflo Medallion 254 Forward Facing Belted, Rearward Seat Track



Evenflo Medallion 254 Forward Facing Belted, Middle Seat Track



Evenflo Medallion 254 Forward Facing Unbelted, Forward Seat Track



Evenflo Medallion 254 Forward Facing Unbelted, Middle Seat Track



Evenflo Medallion 254 Rear Facing Belted, Forward Seat Track



Evenflo Medallion 254 Forward Facing Unbelted, Rearward Seat Track



Evenflo Medallion 254 Rear Facing Belted, Middle Seat Track



Evenflo Medallion 254 Rear Facing Belted, Rearward Seat Track



Evenflo Medallion 254 Rear Facing Unbelted, Middle Seat Track



Evenflo Medallion 254 Rear Facing Unbelted, Forward Seat Track



Evenflo Medallion 254 Rear Facing Unbelted, Rearward Seat Track



Unbelted 5th Percentile Female Reactivation, Rearward Seat Track



3-Year-Old Forward Facing Britax Roundabout Belted, Forward Seat Track



3-Year-Old Forward Facing Britax Roundabout Belted, Rearward Seat Track



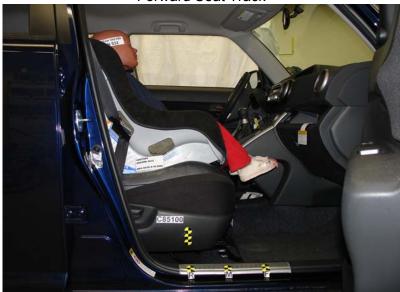
3-Year-Old Forward Facing Britax Roundabout Belted, Middle Seat Track



Unbelted 5th Percentile Female Reactivation,
Rearward Seat Track



3-Year-Old Forward Facing Century Encore Belted, Forward Seat Track



3-Year-Old Forward Facing Century Encore Belted, Rearward Seat Track



3-Year-Old Forward Facing Century Encore Belted, Middle Seat Track



Unbelted 5th Percentile Female Reactivation, Middle Seat Track



3-Year-Old Forward Facing Evenflo Medallion Belted, Forward Seat Track



3-Year-Old Forward Facing Evenflo Medallion Belted, Rearward Seat Track



3-Year-Old Forward Facing Evenflo Medallion Belted, Middle Seat Track



Unbelted 5th Percentile Female Reactivation, Forward Seat Track



3-Year-Old Century Next Step Belted, Forward Seat Track



3-Year-Old Century Next Step Belted, Rearward Seat Track



3-Year-Old Century Next Step Belted, Middle Seat Track



3-Year-Old Century Next Step Cinched With Harness, Forward Seat Track



3-Year-Old Century Next Step Cinched With Harness, Middle Seat Track



Unbelted 5th Percentile Female Reactivation, Rearward Seat Track



3-Year-Old Century Next Step Cinched With Harness, Rearward Seat Track



3-Year-Old Cosco High Back Booster Belted, Forward Seat Track



3-Year-Old Cosco High Back Booster Belted, Rearward Seat Track



3-Year-Old Cosco High Back Booster Belted, Middle Seat Track



3-Year-Old Cosco High Back Booster Cinched With Harness, Forward Seat Track



3-Year-Old Cosco High Back Booster Cinched With Harness, Middle Seat Track



Unbelted 5th Percentile Female Reactivation, Forward Seat Track



3-Year-Old Cosco High Back Booster Cinched With Harness, Rearward Seat Track



6-Year-Old Century Next Step Belted, Forward Seat Track



6-Year-Old Century Next Step Belted, Rearward Seat Track



6-Year-Old Century Next Step Belted, Middle Seat Track



Unbelted 5th Percentile Female Reactivation, Forward Seat Track



6-Year-Old Cosco High Back Booster Belted, Forward Seat Track



6-Year-Old Cosco High Back Booster Belted, Rearward Seat Track



6-Year-Old Cosco High Back Booster Belted, Middle Seat Track



Unbelted 5th Percentile Female Reactivation,
Middle Seat Track



6-Year-Old Evenflo Right Fit Belted, Forward Seat Track



6-Year-Old Evenflo Right Fit Belted, Rearward Seat Track



6-Year-Old Evenflo Right Fit Belted, Middle Seat Track



Unbelted 5th Percentile Female Reactivation,
Rearward Seat Track



3-Year-Old Unbelted, Forward Seat Track, Position 1



3-Year-Old Unbelted, Forward Seat Track, Position 3



3-Year-Old Unbelted, Forward Seat Track, Position 2



3-Year-Old Unbelted, Forward Seat Track, Position 4



3-Year-Old Unbelted, Forward Seat Track, Position 5



3-Year-Old Unbelted, Forward Seat Track, Position 7



3-Year-Old Unbelted, Forward Seat Track, Position 6



3-Year-Old Unbelted, Middle Seat Track, Position 1

## DOT/NHTSA 208 Suppression Test – 2008 Toyota Scion XB (C85100) 3 Year Old No CRS



3-Year-Old Unbelted, Middle Seat Track, Position 2



3-Year-Old Unbelted, Middle Seat Track, Position 4



3-Year-Old Unbelted, Middle Seat Track, Position 3



3-Year-Old Unbelted, Middle Seat Track, Position 5



3-Year-Old Unbelted, Middle Seat Track, Position 6



3-Year-Old Unbelted, Rearward Seat Track, Position 1



3-Year-Old Unbelted, Middle Seat Track, Position 7



3-Year-Old Unbelted, Rearward Seat Track, Position 2



3-Year-Old Unbelted, Rearward Seat Track, Position 3



3-Year-Old Unbelted, Rearward Seat Track, Position 5



3-Year-Old Unbelted, Rearward Seat Track, Position 4



3-Year-Old Unbelted, Rearward Seat Track, Position 6

## DOT/NHTSA 208 Suppression Test – 2008 Toyota Scion XB (C85100) 3 Year Old No CRS



3-Year-Old Unbelted, Rearward Seat Track, Position 7



Unbelted 5th Percentile Female Reactivation, Middle Seat Track



6-Year-Old Unbelted, Forward Seat Track, Position 3



6-Year-Old Unbelted, Middle Seat Track, Position 2



6-Year-Old Unbelted, Middle Seat Track, Position 1



6-Year-Old Unbelted, Middle Seat Track, Position 3

## DOT/NHTSA 208 Suppression Test – 2008 Toyota Scion XB (C85100) 6 Year Old No CRS



6-Year-Old Unbelted, Middle Seat Track, Position 4



6-Year-Old Unbelted, Rearward Seat Track, Position 2



6-Year-Old Unbelted, Rearward Seat Track, Position 1



6-Year-Old Unbelted, Rearward Seat Track, Position 3

## DOT/NHTSA 208 Suppression Test – 2008 Toyota Scion XB (C85100) 6 Year Old No CRS



6-Year-Old Unbelted, Rearward Seat Track, Position 4



Unbelted 5th Percentile Female Reactivation, Rearward Seat Track

# APPENDIX F INSTRUMENTATION CALIBRATION

#### **INSTRUMENTS FOR DRIVER DUMMY NO. 516**

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head X	G04-Z09	Entran	03/13/08
Head Y	G04-Z26	Entran	03/13/08
Head Z	J14-J20	Entran	03/13/08
Neck Load Cell	1748	Denton	05/22/08
Chest X	G16-Z03	Entran	03/13/08
Chest Y	A28-H02	Entran	03/13/08
Chest Z	J03-J09	Entran	03/13/08
Chest Displacement	516	Servo	02/04/08
Left Femur Load Cell	995	Denton	05/01/08
Right Femur Load Cell	991	Denton	05/01/08

#### **INSTRUMENTS FOR PASSENGER DUMMY NO. 511**

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head X	ET21246	Entran	02/21/08
Head Y	ET21255	Entran	02/21/08
Head Z	ET21245	Entran	02/21/08
Neck Load Cell	253	Denton	03/28/08
Chest X	ET21217	Entran	02/21/08
Chest Y	ET21196	Entran	02/21/08
Chest Z	ET21259	Entran	02/21/08
Chest Displacement	511	Servo	02/04/08
Left Femur Load Cell	83	Denton	04/15/08
Right Femur Load Cell	84	Denton	04/15/08

### INSTRUMENTS FOR LOW RISK 5<sup>TH</sup> FEMALE DUMMY NO. 511 (P1 & P2)

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head X	ET21246	Entran	02/21/08
Head Y	ET21255	Entran	02/21/08
Head Z	ET21245	Entran	02/21/08
Neck Load Cell	1748	Denton	05/22/08
Chest X	ET21217	Entran	02/21/08
Chest Y	ET21196	Entran	02/21/08
Chest Z	ET21259	Entran	02/21/08
Chest Displacement	511	Servo	02/04/08
Left Femur Load Cell	83	Denton	04/15/08
Right Femur Load Cell	84	Denton	04/15/08

#### **VEHICLE INSTRUMENTS**

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Left Rear Seat Crossmember X	D12-X24	Entran	06/10/08
Right Rear Seat Crossmember X	J23-J03	Entran	06/09/08
Top of Engine X	F17-Y02	Entran	05/23/08
Bottom of Engine X	04J14-J11	Entran	04/23/08
Left Brake Caliper X	L17-Z23	Entran	02/19/08
Right Brake Caliper X	A27-Z23	Entran	06/09/08
Instrument Panel X	C09-Y19	Entran	01/24/08
Trunk Z	G29-X21	Entran	01/24/08

# APPENDIX G NOTICE OF TEST FAILURE

#### LABORATORY NOTICE OF APPARENT TEST FAILURE TO OVSC

REMARKS: See the attached photograph of the certification label.



Vehicle certification label